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Addresses

THE ASSAULT ON TROPICAL DISEASE.*

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BALTIMORE.

INTRODUCTION.

Tropical pathology is rapidly becoming recognized as a special field in medicine, a field worthy of cultivation by itself and for its own sake. Indeed a number of the energetic and able men of our profession have already made the decision to devote themselves to it as a life work.

Though it was my rare good fortune some years ago to travel as a member of a commission for the special study of tropical diseases, and I had the opportunity in Hongkong, in the Philippines and in India to observe some of the more prevalent maladies occurring there, it was less this fleeting experience, I imagine, which prompted you to ask me to speak on the subject allotted to me, than, in the first place, a desire to extend a courtesy to the appointee to a dignified office, and, in the second place, the conviction that one whose life is devoted to teaching and research in inner medicine might have some qualifications for judging of progress in one of its special fields. For after all the problems and difficulties of disease in warm climates do not differ fundamentally from those of disease in the cooler countries of the earth; they can scarcely be solved without enlightenment by the principles which are true for pathology here as well as there.

THE GROWTH OF INTEREST IN TROPICAL MEDICINE.

A survey of the history of medicine will reveal many examples of stimulation to medical research the outgrowth of changes in the political and economic movements in the world. Perhaps none is more striking, however, than the impulse to medical research excited comparatively recently by the struggle of the nations for the control of the tropics. A great impetus to American interest was given by the Spanish-American war and the relations necessarily established with Cuba, Porto Rico and the Philippines. That experience taught us on the one hand how ultimately the problems of tropical pathology and colonial medicine are bound up with those of military and naval hygiene, and, on the other, how indispensable a knowledge of tropical diseases is for a home country that has to deal with tropical possessions. The proximity of Mexico to the United States, the large volume of trade with South American ports and with the Orient, the increasing number of American inhabitants in the Philippines and West Indies, clearly emphasize the importance of the study of tropical diseases for the people of the United States; this importance is decidedly augmented as we consider the construction of the Panama Canal and the results that inevitably will follow it.

Europeans are no less interested in the problems of tropical medicine. England with India, the Malay States and its African territories is, wisely, greatly concerned. Germany's investigations in tropical pathology are as aggressive as are her political tactics in the hot countries. France, though in a smaller way perhaps, is making notable contributions. Italy, Portugal and even Russia are taking part in the movement to increase our knowledge of tropical diseases, to improve the hygienic conditions in warm climates and to make effective the sanitary engines of modern prophylaxis.

THE PRINCIPAL DISEASES OF THE TROPICS.

The people in hot countries suffer from the "cosmopolitan" diseases, as well as from those peculiar to their lands. The study of these universal maladies as they occur in the warmest climates is a problem by itself, well worthy of serious investigation. The difference in climatic relations, the various races affected, and the peculiar economic and cultural conditions, give in the tropics an especial stamp to types of disease well known all over the world. Typhoid fever, relapsing fever, cholera, dysentery, smallpox, tetanus, tuberculosis, syphilis, diabetes, arteriosclerosis, nephritis and neurasthenia ought to be understood by the physicians of Manila, Singapore, Bombay, Khartoum and Havana as well as by the doctors in Baltimore, London and Berlin. But there is a large group of diseases which occur almost exclusively in tropical and sub-tropical climates and only rarely in the more temperate regions of the earth. A surprisingly large number of them are due to bacteria or to animal parasites. Some of them are infectious or toxic diseases of unknown origin. A large number of them are cutaneous diseases presenting peculiar characters. Of the better known infectious diseases you will recall bubonic plague, dengue, yellow fever, Malta fever, tropical malaria, beriberi and leprosy. Of the intoxications I may remind you of pellagra, lathyrism and snake poisoning. Of the diseases due to animal parasites, the distomal, the bilharzial, the filarial, the uncinarial, the amebic, the piroplasmal, the malarial, and the trypanosomal appear to be the most widespread and important.

INSTITUTES FOR INSTRUCTION IN TROPICAL MEDICINE.

Coincident with the recognition of the momentousness of tropical disease there has developed a series of institutes for its special investigation, a group of hospitals in which cases may be observed, and a number of courses of instruction in tropical medicine, some of them in separately organized schools.

Here in the United States, we are far behind other countries in the foundation of such institutes and in the planning and realizing of such courses of instruction. American contributions to tropical medicine have been great, but they have been along other lines. There is

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one notable exception and that is not in the United States, but in a dependency. Thanks to the liberal mindedness of the Hon. Dean C. Worcester of the Philippine Department of the Interior, a biologic laboratory has been established as a part of the Bureau of Government Laboratories in Manila, with Dr. Richard P. Strong as director; it has been admirably equipped, has a fine library and other exceptional facilities, and is attracting a high type of trained investigators. This laboratory and its management guarantee the thorough investigation of tropical pathology in the Philippine Islands; that it will continue to reflect credit (as it has already done) upon American medicine as a whole there can be no doubt. For an account of the organization and equipment of this Institute I would refer you to an article by the superintendent of the government laboratories in Manila, Dr. Paul Freer.[1]

But within home territory, despite the excellent work carried on in tropical pathology by our University laboratories, the Army, Navy and Marine-Hospital service, so far as I know, no institute especially set apart for the study of tropical disease has thus far been endowed or planned. A choice opportunity thus lies open to some wealthy person who wishes to benefit humanity.

There has been a good deal of discussion as to whether the institutes for tropical research should be situated in the home countries or in the tropical lands themselves. As noted, America thus far utilizes only laboratories established for more general purposes at home, and has set up one permanent laboratory in the tropics. The advantage of a permanent station in Manila must be obvious to all; with abundant materials and facilities for work on the spot, investigators avoid those difficulties which so often rob travelling commissions both of valuable time and of rare opportunity. Much can be said, however, for the more generally accepted view that special institutes should be organized at home, one or more for each great nation. Germany, for example, set up in 1900 an Institute for Naval and Tropical Hygiene (*Seemanskrankenhaus und Institut für Schiffs- und Tropenkrankeiten*) in Hamburg, which serves as a sort of central institute for all her many scattered colonies. It has the advantage of economy on the one hand and of contact with home science on the other. The Germans fit out expeditions to the tropics instead of establishing stations there, though these expeditions frequently spend large sums of money in setting up temporary laboratories in the tropical regions where they work. In Hamburg the institute has a hospital connected with it; it contains a fine library. Regular courses of instruction in tropical diseases, six weeks in duration, are given two or three times a year. There is no examination at the end of the course. A good description of the institute and its work will be found in an article by Dr. Nocht, its director.[2]

In England, too, the tendency is toward the establishment of home institutes for the study of tropical diseases, though certain laboratories, usually temporary, such as the plague laboratories in India, the beriberi laboratory in the Malay States, the Burroughs Wellcome laboratory at Khartoum, have been set up nearer the equator. Largely through the far-sightedness of the Hon. Joseph Chamberlain, there has been founded at Albert Dock in London as a branch of the Dreadnaught Seaman's Hospital, the now well-known London School of Tropical Medicine (Director S. C. Low), where Sir Patrick Manson and other lecturers, including Hewlett, Duncan, Cantlie, Simpson and Sambon, are at work. It has an income of some ten thousand dollars per annum, and gives several courses yearly to physicians entering the Colonial service or to others interested in tropical diseases.[3]

The Liverpool School of Tropical Medicine was founded in 1899 and is supported by voluntary contributions. Its aims are first to train physicians in tropical hygiene; secondly, to make original investigations of tropical diseases; and thirdly, to organize preventive measures for the tropics. It gives many shorter and longer courses of instruction and issues certificates of proficiency. Dr. R. Boyce is the dean of the school, and Major Ronald Ross is the principal professor with tropical experience. The special laboratory for Tropical Medicine and Parasitology forms a part of the magnificently equipped Thompson-Yates and Johnston laboratories in Liverpool.

In France there is the Institute of Colonial Medicine (*Institut de medicine coloniale de Paris*); in Italy special instruction is given in "exotic pathology" and "naval hygiene" by Rho and Pasquale. Even Portugal, I am told, has a school of tropical medicine.

EXPEDITIONS AND COMMISSIONS FOR THE STUDY OF TROPICAL DISEASES.

Most fruitful in results has been the promotion of expeditions and commissions to the tropics for the study of particular diseases. The wealth of information we now possess concerning plague and Asiatic cholera is largely due to the work of such commissions. The Yellow Fever Commission of the United States Army, with Walter Reed at its head, carried out in Cuba the remarkable series of experiments well known to us all. The Johns Hopkins Medical Commission to the Philippines gave Flexner the opportunity to begin his important studies on dysentery; the light recently thrown on the summer diarrheas of infants may be regarded as a direct sequel to his investigations.

The Liverpool School of Tropical Medicine has sent out nearly twenty different expeditions to the tropics, among them commissions which have greatly increased our knowledge of malaria and sleeping sickness. The German government is very liberal in the financing of expeditions. R. Koch, who has already been sent on a number of costly excursions, has left again this month for Entebbe in British Uganda. He has been sent for eighteen months to continue the study of sleeping sickness, and has been allotted some $30,000 for his expenses during the first year.

THE BIBLIOGRAPHY OF TROPICAL DISEASES.

A subject of such rapidly extending significance, and one which has to be taught to an increasing number of medical men, could not go long without its text-books. Sir Patrick Manson's "Tropical Diseases,"[4] is widely read in English speaking countries. His "Lane Lectures" given in San Francisco last year also afford an easy approach to the subject.[5]

Of German books, Scheube's "Diseases of Warm

1. Freer, P. C. Description of New Buildings, Bull. No. 22, Dept. of Interior, Bureau of Govt. Laboratories, Manila, 1905, 1-29.
2. Nocht, D. Organization des Unterrichts ueber Tropenhygiene und Tropenkrankheiten in Hamburg. Janus, Amst., 1904, ix, 170-876.
3. Manson, Sir, P. On the London School of Tropical Medicine. Jour. Trop Med., Lond., 1904, vii, pp. 10-14; also, The London School of Tropical Medicine, what it has done, is doing, and hopes to do. Climate, Lond., 1903-4, v, 12-19. See also Stiff (E. B.) Report on the Schools of Tropical Medicine and Military Medical Schools of England. Rep. Surg.-Gen. Navy, Wash., 1904 5, 167-171.
4. Manson (Sir P.) Tropical Diseases, 3d ed., London, 1903.
5. Manson (Sir P.): Lectures on Tropical Diseases. Lane Lectures for 1905. London, 1905, pp. 230.

Countries"[6] is excellent. The references at the ends of the individual chapters permit of quickly getting at the original sources. The book has been translated into English.[7] Just recently the first volume of a new handbook has appeared in Germany.[8] I have not yet had the opportunity to study it. The books of Rho, Le Dantec, Brault and Muzio may be mentioned without exhausting the list from other countries.

Original articles on tropical disease appear in various scientific periodicals. Recently several journals have been established which are devoted either wholly or largely to the subject. Prominent among these are the *Journal of Tropical Medicine* issued twice a month in London, the *Archiv für Schiffs- und Tropenhygiene* in Hamburg, *Janus* in Amsterdam and the *Philippine Journal of Science* in Manila.

Almost every conceivable phase of the subject is being dealt with in special articles in the general medical journals. A glance through the Index Medicus under the caption "Tropical Medicine" will give an idea of the activity prevailing. There are papers dealing, for instance, with diet in the tropics, the influence of the acquisition of tropical territory on American medicine, the effects of tropical diseases on commerce, the care of the aged and infirm in the tropics, and the particular diseases which occur in various localities such as the Panama Canal zone.

RECENT ADVANCES IN THE STUDY OF PARTICULAR DISEASES.

So avid are medical men to-day of knowledge of tropical diseases that reviews of progress are demanded at brief intervals. The Journal of Tropical Medicine, for instance, has recently reviewed the work of 1905[9] and in the articles by McCrae,[10] Blumer,[11] and Boyce,[12] a great deal of newer work is referred to. I dare not in the time allotted to me do more than call your attention most briefly to some of the more interesting advances.

Bubonic Plague.—This disease, interesting especially to me on account of the opportunities I had for observing it, first in Hongkong, later in Bombay and Poona and still later as a member of the Federal Commission in San Francisco, continues its ravages in some countries, especially in India, unabated. It may surprise you, as it did me, to learn that the mortality from plague, in India alone, during the first six months of 1905 amounted to 878,602, the highest record for a half year thus far made in the epidemic. In the latter half of the year the disease was less prevalent, though the number of deaths even then was enormous.

Workers in Hongkong assert that they have shown that plague is in most instances set up by infection in the alimentary canal, an opinion in which pathologists will I believe be slow to concur. The opinion of Cantlie (1897), so often spoken of nowadays, that the black rats (*Mus rattus*) and brown rats (*Mus decumanus*) play a different part in the spread of the disease, needs farther confirmation before it is accepted.

In countries where plague is rampant, preventive inoculation is gaining ground. Haffkine's method is followed as a rule; it is desirable that the new autolytic prophylactic worked out by R. P. Strong be tried on a large scale, since theoretically it should be very serviceable.

Dengue.—The most important new observation on the disease is that of Sutton and Carpenter in the Isthmus of Panama, which shows it to be one of the diseases in which the white corpuscles are diminished in number and there is a relative preponderance of the small mononuclear variety.

Yellow Fever.—The fundamental experiments of Reed, Lazear, Carroll, and Agramonte, which demonstrated the rôle of a particular form of mosquito, *Stegomyia fasciata*, in the transmission of yellow fever, a conception first formed by Finlay of Havana, has been manifoldly confirmed by other observers, in Cuba, in Mexico and in South America. The brilliant application of the discovery to yellow fever prophyiaxis in Havana by Gorgas is well known to all. After last year's experience with yellow fever in New Orleans, everyone is wondering as to what will happen there this year. The death rate in the epidemic in New Orleans and adjacent places last autumn was exceptionally low; of 3,400 attacked only some 451 died (13.20 per cent). In Pensacola there were 80 deaths in some 560 cases (14.28 per cent). It is rather strange, as a recent commentator points out, to see Havana turning the tables on New Orleans and establishing a rigid quarantine against that city! It is asserted that the few cases which occurred in Havana last year were all imported.

Malta Fever, Mediterranean Fever, or Undulant Fever.—An occasional soldier or sailor returns to the United States suffering from this disease (Curry, Craig), and it is known to occur in Porto Rico (Musser and Sailer), and in the Philippines (Strong and Musgrave). This disease, which in some respects resembles typhoid fever, is separable from it clinically by its more protracted course, the more marked remissions in the fever, the sweating, the frequency of joint pains and neuralgias and the orchitis and epididymitis which frequently complicate it. The disease is due to infection with the *Micrococcus melitensis* (Bruce, Hughes). It is not contagious. The diagnosis is easily made by means of the serum reaction introduced by Wright.

Some very important work has been done during 1905 by the so-called Mediterranean Fever Commission, consisting of Colonel Bruce, Major Horrocks, and Drs. Shaw, Zammit and Johnstone. It is regarded by some as the best piece of work of the year in tropical medicine. This commission studied the duration of life of the causative micrococcus outside the body, and made investigations concerning its occurrence in the blood, urine, feces and sweat of patients suffering from the disease; they also studied the disease experimentally in monkeys. It appears that the milk supply in Malta is derived chiefly from goats, and in June of last year Zammit made the important discovery that the Maltese goats are infected with *M. melitensis*; the coccus was isolated from the milk and from the urine of these animals.

Malaria.—This disease, of paramount interest to physicians in Maryland, is still being assiduously studied and its ravages are being curtailed. The diagnosis has been rendered more rapid and certain by the introduction of the dehemoglobinized-thick-blood-film method

6. Scheube, B.: Die Krankheiten der warmen Länder. Ein Handbuch für Aerzte. 3 Aufl., Jena, 1902.

7. Scheube, B.: The Diseases of Warm Countries. A handbook for medical men. Transl. from the German by Pauline Falcke. Ed. by J. Cantlie. 2d revised ed., Phila., 1903.

8. Handbuch der Tropenkrankheiten. Unter Mitwirkung von A. Baelz (*et al*) Hrsg. von Carl Mense, Bd. I, Leipzig, 1905. J. A. Barth, 366 pp. 9 pl., 8.

9. cf. Some Points of Interest in Tropical Medicine During 1905. Jour. Trop. Med., Lond., 1906, vol. ix, p. 6.

10. McCrae, J.: Recent Progress in Tropical Medicine. Inter. Clin., Phila., 1904, 14s, ii, pp. 22-36.

11. Blumer, G.: The influence which the acquisition of tropical territory by the United States has had, and is likely to have on American Medicine. Trans. Am. Med. Assn., 1905, vol. xlv, pp. 169-177; see also Med. News, N. Y., 1905, vol. lxxxvii, pp. 107-114.

12. Boyce, R.: The Year's Progress in Tropical Medicine, Brit. Med. Jour., Lond., 1905, ii, 1258.

and of the Jenner and Hastings stains. The studies of Craig on latent or masked malarial infections, from which 25 per cent. of the soldiers returning from the Philippines suffered, should teach us a salutary lesson.

The distribution of the mosquito which transmits malaria is becoming better known. Hirshberg and Dohme's studies here in Baltimore were supplemented last year by Coffin's careful search. The various methods for the prevention of malaria—the prophylactic administration of quinin, the use of mosquito netting, the destruction of the breeding places of the mosquito—are being tried, one method being favored in one place, another in another. That the annihilation of the mosquito is not an impossible, nor even an impracticable task is the conviction gained by many who listened to the interesting address recently delivered here by Dr. Smith of Connecticut. In Italy the destruction of breeding places has thus far seemed too formidable a task, but in the Malay States (at Klang and Port Swettenham) Watson has applied the method successfully. Celli's report of the great anti-malarial campaign in Italy makes most interesting reading. There is no longer any doubt that malaria is a preventable disease; the only question is, when shall we prevent it?

Beriberi.—This disease, the *Kakke* of Japan, continues to interest and to puzzle medical scientists. The etiology is still obscure. Dr. Hamilton Wright[13] believes that it is an acute or subscute infectious disease, due to a specific but as yet undiscovered micro-organism. He thinks that the germs may be taken in with food of various kinds, and his theory is that the micro-organism, whatever it is, multiplies chiefly in the pyloric end of the stomach and duodenum, and that it produces a toxin which is immediately absorbed and affects first the terminals of the vagi in the stomach and heart, and later on other nerves. Wright thinks the disease is spread by the feces, and regards this view as of great importance for prophylaxis. His practical results at the jail in Knale Lumper appear to lend some support to his view.

The recent Japanese announcement of the discovery of a specific bacterium in Kakke does not seem to be well founded, as may be read between the lines of the conservative report of Herzog, who went from Manila to Japan to investigate the matter.

Tick Fever.—The tick fever of Africa, first observed by Livingstone, was definitely proved in 1904 to be due to the bite of a tick, the *Ornithodorus moubata* of Murray. The disease has been carefully studied recently by Todd, of McGill, and the late Dr. Dutton, as well as by Ross and Milne in the Congo Free State. Koch thinks that the disease is identical, clinically, with relapsing fever, and that it is due to a spirochete which is probably the *Spirochæte obermeieri*.[14] It has been shown that the tick can transmit it, and it seems likely that the transmission is not merely mechanical, but that there is a special phase of development in the tick. Koch has studied the disease in East Africa.[15] He states that the tick lives in the floors of native huts and sucks blood at night. The spirochete does not multiply in the tick's stomach; it leaves the alimentary tract of the tick in a few days, and is later found in the ovary, multiplying in the eggs. Koch advises travelers to pitch their tents on ground not previously used for camps.

Uncinariasis.—Since Ashford's discovery of the prevalence of hook-worm disease in Porto Rico in 1900 and the stimulus exerted by Stiles' excellent monograph, the physicians in the Southern States, especially in North Carolina, Georgia and Alabama, have reported a large number of cases of the disease. We meet with it not infrequently in the wards of the Johns Hopkins Hospital. The theory that the parasite enters through the skin has received much support just lately from the experimental work of Looss.[16]

Sleeping Sickness.—One of the most interesting advances of the time is the clearing up of the causation of that remarkable disease known as the sleeping sickness of West Africa, or negro lethargy. In November, 1902, Castellani, while examining the cerebrospinal fluid obtained by lumbar puncture from a case of sleeping sickness, found a trypanosome in the microscopic field. He seems to have attached no especial significance to the observation, but on mentioning his finding to Lieutenant-Colonel Bruce some time later, the latter initiated and carried out an investigation which demonstrates that sleeping sickness is due to a trypanosomal infection of the nervous system. In 1903 it was shown that in at least 70 per cent. of the cases of sleeping sickness the trypanosoma can be found in the cerebrospinal fluid. It had been supposed earlier that a special fly—the so-called Uganda tsetse-fly, *Glossina palpalis*—might transmit the disease, and Bruce found (1) that its distribution corresponds to that of sleeping sickness, and (2) that it can and does carry the parasite.

In 1901, at Bathurst, Gambia, Forde found a trypanosome in a case of anomalous fever, an observation confirmed later in the year by Dutton. This human trypanosoma fever is due to an especial trypanosome, called by Dutton the *Trypanosoma gambiense*. In 1903 Manson and Mott, studying a case of trypanosoma fever in a European lady, were surprised to find the symptoms of sleeping sickness developing in their patient. The idea occurred to them that "trypanosoma fever" is merely the first stage of sleeping sickness, and this idea has been shown by Laveran and other workers to be correct. The Royal Society appointed a sleeping sickness commission, which has recently reported. Its members find that sleeping sickness begins as a specific polyadenitis caused by the *Trypanosoma gambiense*. Besides the enlargement of the glands, there is an increase in the small mononuclear white corpuscles in the blood. The sleeping symptoms develop in a late stage, and the disease is then invariably fatal. Cases in the stage of polyadenitis, before the lymph spaces of the nervous system are invaded, may recover, especially if arsenical preparations be given. The bacteria occasionally found in the blood and tissues at autopsy have no relation to the disease proper, but are secondary invaders. While the Uganda tsetse-fly (*Glossina palpalis*) is capable of transmitting the disease, other biting flies, such as *Stomoxys*, can not do so.

In this connection the work of Novy of Ann Arbor and his associates assumes the greatest importance. These American parasitologists have succeeded in grow-

13. Wright, H.: An inquiry into the etiology and pathology of beriberi, London, 1903.

14. Since the above was written Dr. F. G. Novy, Ann Arbor, has reported at the Association of American Physicians in Washington, his studies on the spirochete of tick fever. His investigations appear to demonstrate conclusively that this spirochete is not identical with that of ordinary relapsing fever, but is a distinct species. There may be, therefore, several varieties of relapsing fever, each with a special causative spiral organism. Novy names the micro-organism of African tick fever the *Spirochæte du Bosi*.

15. Koch, R.: Vorläufige Mitteilungen ueber die Ergebnisse einer Forschungsreise nach Ostafrika. 1. Recurrens. 2. Entwicklung des Piroplasma bigeminum. 3. Küstenfieber der Rinder. 4. Tsetsefliegen und Trypanosoma. Deutsche med. Wochft., Leipzig, u. Berlin, 1905, xxxi, 1865-1869; see also Transl., Jour. Trop. Med., London, 1908, ix, 43.

16. Looss, A.: Einige Beobachtungen ueber die Infektion mit Ankylostoma duodenale von der Haut aus. Ztschr. f. klin. Med., Berlin, 1905, lviii, pp. 41-83.

ing trypanosomata on artificial media in the laboratory, and their work is helping to differentiate clearly the various forms of trypanosomiasis. Africa has no less than six different trypanosomal diseases, all of them very important, including nagana, dourine, galziekte, zonsfana, Gambian horse disease and human trypanosomiasis.

The recent memoirs of the Liverpool School of Tropical Medicine contain important papers on trypanosomiasis and sleeping sickness, especially on the method of diagnosis by aspiration of enlarged lymph glands.

AMERICA'S OPPORTUNITIES AND OBLIGATIONS.

That America is alive to the importance of research in tropical medicine the records of the last few years clearly show. But that in the immediate future she must do more than she has yet done is also clear. Strong appeals for work in tropical medicine are being made by medical men in various parts of this country, especially by those who live near the Gulf of Mexico.[17] Nothing is truer than the statement of one of them that "opportunity and obligation are indissolubly bound together," and he urges appropriations by the state both for instruction and research. The problems to be solved are large in their scope, the difficulties to be overcome are tremendous, but we may say with safety that they are not too great for American energy.

THE NEW HYGIENE.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON HYGIENE AND SANITARY SCIENCE, AT THE FIFTY-SEVENTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, BOSTON, JUNE 5-8, 1906.

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CHICAGO.

A real advancement of our civilization must imply additional knowledge and increased altruism. A progressive evolution should mean a new and more comprehensive understanding of the truth, a more thorough realization of responsibility and opportunity, a more earnest desire for achievement, a more rational endeavor to secure definite results, and, at the same time, a more consistent appreciation of the value of exact justice. Man changes by virtue of development and environment, but the primitive impulses are subject to but slight modifications in the course of ages, and the animal part of his nature remains essentially what it has always been. This fact is not necessarily deplorable. No victory is possible without an adversary, no success is worthy without struggle.

BIRTH OF THE NEW HYGIENE.

Notwithstanding all philosophic inquiry, the great scheme of life still remains unknown and perhaps unknowable, but the accumulation of knowledge and experience makes possible a readjustment of preconceived ideas, so that we understand, perhaps now better than ever before, the relative value of events which pertain to individual life and to the community at large. We are learning the truth; our estimate is becoming more exact of the real worth of character, of honesty, of wealth, of labor, of peace of mind, of freedom from care, of safety from danger, of relief from pain and of immunity from disease. We are also learning many new things, and in the light of recent developments in science and in experience our understanding of many well-known facts is acquiring a new significance which necessitates changes both of appreciation and of administration. Thus the new hygiene comes into being.

INTERDEPENDENCE OF ALL MEN.

In the science of hygiene the advance, both actual and potential, is most practical and effective. Sanitary science was called into existence when nomadic tribes coalesced and when primitive law determined that individual liberty does not permit the injury of another even inadvertently. This principle is the essence of the science. Sovereigns have sought to suppress it, capitalists have disregarded it. The poor, in their ignorance, have suffered as all must suffer who transgress the immutable law of Nature, and the rich, only too often, have fallen victims to the pestilence which originated in the slums and which a timely consideration might have prevented. Thus is demonstrated the interdependence of all men, and from a knowledge of the relations we bear, even unconsciously and in some instances unwillingly, one to the other, is evolved a true humanitarianism and a real religion.

THE NEED OF THE TRUTH.

The new hygiene is an exponent of the necessities of modern civilization in all details that relate to the health and happiness of the human race. To be effective it must be practical and to secure definite results it must, above all things, teach the truth. Here is the first matter of importance, the first essential of success, the chief object of all earnest endeavor. We must know the truth which shall make us free, and we must teach what we know. Just here, too, is encountered the first obstacle to an advance that has for its aim the amelioration of the human race, and in many instances in the past this obstacle has proved insuperable.

THE EXERCISE OF TOLERATION.

History shows that in the beginning of government might was right, in the beginning of religion the progress from phallic worship was gradual, and invariably the domination of ruler and priest was selfish, and often oppressive and tyrannical. It has taken centuries for the development of the idea of equity. It is only of late years that we begin to understand the meaning of human brotherhood and to appreciate in its full significance the necessity of liberty, the inadequacy of repression and the inestimable value of true education as a real measure of prophylaxis and as a practical means of right living. The tendency of the times is liberalizing. Our religion is not the only religion, nor does it embody all the truth. Our government is not perfect, nor are all other governments faulty. Indeed, it has been well said, and the present position of Mexico would seem to verify the statement, that a beneficent despotism is at times an admirable form of government. A great step in advance is taken when we are able to see beyond the confines of our individual methods of worship and government and are willing to acknowledge good in the methods of others. It needs no sect to prove the beauty of integrity, sobriety and decency of life. A true morality is the basis of every true religion; dogmas, creeds and ceremonials are but paths leading to a common goal. The welfare of the people should be the chief object of every government; the methods in use are but expressions of the average intelligence of the community applied to existing conditions. Our boast is that our form of government is truly representative. Alarming in the

17. Moore, J. T.: Tropical Diseases; Their Importance and the Opportunity for Their Study in Texas Imposes the Obligation to Provide the Facilities for Training Medical Men in Their Prevention, Diagnosis and Treatment. Texas Med. News, Austin, 1902-3, xii, pp. 437-444.

extreme are statements made by prominent statesmen that the accumulation of wealth and power in the hands of a few is a menace to our system of government, because it tends to permit the exercise of a despotism which subserves selfish ends and militates against the well-being of the great mass of our population. The new hygiene, taking cognizance of this important factor in our present-day civilization, as indeed it is bound to do in the case of all conditions that affect the welfare of humanity, gives evidence from its point of view and is prepared to show that the accumulation of great wealth is too often effected at the sacrifice of health, that the possession of millions is an incentive to dissipation, that morality, decency and probity apparently are cast aside when financial independence is assured, that disease and disgrace are not infrequently the sequelæ of affluence.

FUNCTION AND DUTY OF THE NEW HYGIENE.

What is to-day the function and the duty of the new hygiene? It should study the past to appreciate the necessities of the present and the possibilities of the future. To be most truly effective it will consider man in his entirety as he is, and not as preconceived notions would imagine him to be. It must be broad in its philanthropy, liberal in its charity, comprehensive in its effort. It must be an active, sensitizing force in the community. It must be more than a name or an abstract proposition. It must become a part—a most important part—of every life, for it has to do with the health and happiness of humanity, without which no life is satisfactory. The practitioners of medicine are the exponents of this philanthropy, the priests of this religion of health. To direct the destiny of mankind is their sacred privilege and their high office. Their influence more than that of any other element in our society must determine the future of the race. The greed of avarice must be restrained. The outbreaks of lawlessness must be condemned. The conditions of every community must receive thoughtful and serious consideration to the end that the beneficent influence of the new hygiene may prevail for the good of all humanity.

PHYSICIANS AND HYGIENE.

The profession is now organized. All petty differences are forgotten. The reunion is complete. Medical men can not be classed together as a unit to be extolled, maligned or condemned. They are human like other men, and there are among them examples of all types of the genus homo. They are subject to the same temptations and influences as other men, and they furnish their share—which is, I believe, a relatively small share—of the perverts and criminals of our society. Nevertheless, the great mass of the profession is honest and active in philanthropic endeavor. They must live, and usually the exercise of their professional talents must furnish the means of livelihood. But the spirit of modern commercialism has ensnared a comparatively insignificant contingent. The great majority remain members of a profession which is not primarily a business. They remain true to their principles and their ideals. They are servants of the people, striving to aid the ill and the injured, trying to protect the ignorant and innocent if need be even against themselves. Others receive their reward in the accumulation of property, the glory of renown, the acclaim of the public. The true physician has the approval of his conscience, the satisfaction of duty performed, the opportunity to do good. Who shall say that his recompense is inadequate?

SCOPE OF THE PROGRAM.

The program of this meeting of the Section on Hygiene and Sanitary Science shows to what an extent the profession of to-day realizes its opportunity to contribute its share toward the solution of the live topics of the times. Gathered together here from all parts of this great country are representative men and women, whose lives have been devoted to the cause of philanthropy. Some are active and energetic with the impulse of youth to excite to continued effort; others have passed the heat of the day, have borne the burden of the past, have known the indignity of misrepresentation, and have been privileged to suffer in the interests of humanity for the good of the cause. From Berlin, the great medical center of the world, come two distinguished and honored guests whose fame is international and whose teachings have done much to advance American gynecology and dermatology. From France and from New South Wales come highly valued contributions. From universities, from kindred professions, from the ranks of true philanthropy, and from the army and navy have come others, actuated by a common purpose—the desire to benefit mankind. Now shall we forget at this time the many men and women who in the past struggled and sometimes died for what they believed to be the truth. They did what they could, but in many instances even their names are now forgotten. Nevertheless their work has been effective, their influence remains. Their unselfish devotion to duty, their steadfastness in the faith, their demonstrated love for humanity will for centuries to come inspire the earnest worker along the lines of philanthropic endeavor to ever increased effort. Their work is done, but they did not live and die in vain.

WORK OF THE UNITED STATES.

In the great cause of humanity the United States has assumed a new responsibility and most cheerfully has taken up a share of the white man's burden. Our duty to the Filipinos is finding expression in determined educational effort, and in the exploitation of a new hygiene which will result in increased health and happiness for those in our charge. Our commercial interests with the far East become more intimate. It is our duty to see to it that the residents of the Pacific coast be not subjected to increased danger from bubonic plague in consequence of an increase in our business relations with the Orient. This subject is to-day presented for your thoughtful consideration.

PREVENTIVE MEDICINE.

The great white plague—tuberculosis—will also be considered at our meeting. The past few years have witnessed a wonderful effort along the lines of prevention and the results have been extremely satisfactory. If any one factor has exerted the greatest effect I believe it can truthfully be said that publicity regarding etiology, transmission of disease and rational hygiene is chiefly responsible for the enthusiastic desire of the public to know the truth and for the universal co-operation in prophylaxis which has prevailed and which has produced such wonderfully beneficent results.

PUBLICITY REGARDING THE VENEREAL PLAGUE.

There is another plague, which has been called the great black plague. It is the venereal plague. In some respects this is the most serious of all, for it produces among adults the greatest morbidity and as a disturbing element in our society it takes front rank. Originating, as it does usually but not always, from extramarital sexual congress, its consideration in the past has been

tabooed because a false modesty has prevented an exposition of the truth. With the success that has attended publicity regarding tuberculosis the past few years there has arisen in this country among eminent venereal specialists and true philanthropists the conviction that maudlin sentimentality no longer can prevent a consistent study of all etiologic factors and a dissemination among the public of the knowledge we already possess. In an earnest endeavor to produce definite results—that is, to limit venereal infection—facts must be recognized and the truth must be told. If this is done we must, first of all, admit the dominating influence of the sexual instinct which determines the perpetuation of the race. Why should we not admit this fact? This is the twentieth century, and education is said to be the palladium of our liberty. From the ignorant immigrant there is evolved in the second generation a real American. In appearance, in thought, in subjection to the law, in respect for our institutions, in love for our country, the child of the anarchist becomes one of us. If such a transformation as this can take place, how wonderful, then, are the possibilities if a true education will teach the dangers that confront the young and the ignorant, if the physiology of the whole body may be taught, if the study of man be made of chief importance in every curriculum.

THE CRIMES AGAINST WOMANKIND.

Intertwined with venereal disease and a result of perverted, premature or misdirected extramarital congress are the many crimes against womankind. The subject in its entirety is the most important that can engage the attention of the humanitarian. Here, also, we now believe, the policy of silence is responsible for the desolation of many a home and the ruin of many a girl. Ignorance, an etiologic factor in criminal abortion, illegitimacy and infanticide, must no longer be permitted to expose the innocent girl to unknown danger, but the new hygiene must intervene to protect her against the passion of the man and, if need be, even against herself.

I favor, as I have done for years, the teaching of the truth regarding ovulation, menstruation and conception. These subjects are among the most important matters the girl can know. I believe in teaching the boy regarding the sexual instinct, the possibility of continence, the dignity of virility, and his duty as a man, worthy of the name, toward woman. I believe in the advocacy of decency and the inculcation of principles of honor. This can not be done by keeping silent. It is only possible by speaking out plainly, by telling the truth.

INFLUENCE OF ALCOHOL.

In connection with the venereal plague and the crimes against womankind, affecting humanity in many important details, is the use of alcohol. It is necessary to know in no spirit of fanaticism, but scientifically and truthfully, to what extent the indulgence in alcohol is a disturber of our social conditions and an etiologic factor in disease. Moreover, we must know how and to what extent the young should be taught regarding the influence of alcohol on the health and happiness of our citizens. Extravagant statements will be received with mistrust. Prohibitory assertions will not often be heeded. Even the child knows that men who use alcohol may live to enjoy old age and may remain honorable citizens. The truth must be disclosed in a spirit of fairness.

To the solution of these momentous problems of our present civilization the new hygiene consecrates itself in all earnestness. We shall not to-day give the final answer nor say the last word. We will, however, do something. We will say what we think. We will express our ideas, but we will not deny others the right to differ with us. In a spirit of charity and toleration the new hygiene, through the kindly co-operation of distinguished and honest workers, whose experience entitles them to speak with authority, now offers, in the interest of humanity, a consideration of these most important topics.

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TUBERCULOSIS A SOCIAL DISEASE.*

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NEW YORK.

Were our great Osler in my place, he would probably in his own inimitable way, treat the subject as if it were a clinical case. He would begin with the etiology, then describe the symptoms, then the prevention and the curative measures, and lastly, the prognosis, the outlook. I will endeavor to carry out this idea as well as I can in my present address, also beginning at the bottom of the social ladder with the children.

Tuberculosis in infancy is indirectly due, on the one hand, to either a hereditary or an acquired predisposition, and directly, on the other hand, to a postnatal infection. Direct hereditary transmission of the tuberculous germ from parent to child is of exceedingly rare occurrence. When the father or mother is tuberculous the child may inherit a predisposition, which I like to describe as a physiologic poverty, giving the child less resisting power to the invasion of tuberculous diseases. The same condition may be produced when the child, instead of being raised at the breast of a healthy mother or wetnurse, is fed from a bottle. Such a child, unless the greatest care is bestowed on the artificial feeding, will almost invariably remain below par in health. The earliest postnatal infection takes place if a tuberculous mother or tuberculous wetnurse is allowed to give the breast to the child, or if she carelessly coughs over the child, kisses it on the mouth, or if, when feeding it, she puts the nipple of the milk bottle or the spoon alternately into her mouth and then into the baby's, in order to test temperature or sweetness. Furthermore, we must not forget the very probable source of infection through milk from tuberculous cows used as food for the infant.

Lastly, there is another source of infant infection, threatening particularly infant foundlings or deserted little ones, who have, at first, been inmates of foundling asylums or infant hospitals, and because of their not having done very well, have been given to the care of families residing in the country. In institution life there is, of course, always some danger of infection from a tuberculous infant to a healthy one; secondly, from tuberculous milk supply; and, thirdly, though more rarely, from tuberculous attendants. To my mind, the danger to the little ones given out to families living in the country is far greater than in an institution. Do you know that the majority of families, who make boarding babies a business, confide them to the care of

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the invalid of the family, who, perhaps, nine times out of ten, is a consumptive? The danger which arises to these little ones from such a consumptive attendant is obvious, particularly when we consider the usually inferior hygiene in such homes and the ignorance of the inmates of the nature and prevention of tuberculosis.

Before going any further, let us see what we may be able to suggest in order to combat these various sources of tuberculous predisposition and actual infection. The prophylaxis regarding the transmission of a predisposition to tuberculosis lies, of course, in preventing tuberculous individuals from marrying and procreating a predisposed race. It is not always easy to prevent the marriage of tuberculous individuals, for some marry without knowing that they are tuberculous, and some, who even know they are so, marry anyhow, no matter what the physician says, and there is no law to prevent them from doing so. In such instances, unfortunate as they are, the physician has a divine mission to perform in preserving the life of the tuberculous mother, which is always endangered by pregnancy, and preventing the transmission of a tuberculous diathesis to an innocent child. His mission is thus teaching prevention. I feel very strongly on this subject, but I know that there are many worthy men and women, inside and outside of the medical profession who differ with me. However this may be, I am willing to take the responsibility before the law and my God for each time I have taught a consumptive husband and wife not to procreate a tuberculous race.

Certain authors have made the statement that tuberculous parents confer on their children an immunity against the contraction of the disease. In twenty years of labor, exclusively devoted to tuberculous patients, I have not found the slightest evidence for this deduction; on the contrary, I have found children of tuberculous parents owing to their inherited physiologic poverty, anything but immune.

What can we do to have more breastfed and vigorous babies and thus a more vigorous race, a healthier type of American men and women, strong enough to resist a tuberculous invasion, or, for that matter, any other infectious disease, to which a weakened organism easily falls prey? For, after all, with all due respect to our beloved President, let me say that as a physician with, I may modestly claim, a somewhat large experience among the poor and poorest of the poor, the middle classes and also among the well-to-do, and as a student of sociology, as well as of preventive medicine, I am not for quantity but for quality.

I know I am in the presence of earnest students, who by careful study of the social, as well as the medical aspect of tuberculosis, are anxious to better the condition of their fellowmen. For this reason I speak plainly and am willing to give you the result of some interesting observations from my own practice which, I think, justify me in taking this position. It is invariably my custom when examining a patient to take down the family history, and one of the questions asked is, "how many children were in your family and were you born the first, second, or third, etc.?" In the majority of cases, when there is a large family, it is the 5th, 6th, 7th, 8th or 9th born who has contracted tuberculosis. This is to be explained, on the one hand, by physiologic reasons, the parents being in advanced life and less vigorous; on the other, by economic reasons, the later born children can not, because of increased expense, receive that particular care and that good and ample nourishment which was the privilege of the first ones to receive when the family was still small. No amount of wealth, no family prestige or social connection can give the child that inheritance which it receives when born of vigorous parents, nursed by its own mother and tenderly cared for until able to care for itself.

Let the mothers who, for the sake of pleasure and convenience, abandon the divine privilege of nursing their own children, change this unnatural practice. I feel certain that if they but knew the difference in the physical and intellectual makeup of their sons and daughters, if tenderly nursed by themselves, or when handed over to strangers to become bottle-fed babies, they surely would do differently. I know it will be said that not every mother can nurse her infant. This is true in some instances; but to the women, the future mothers of mothers, I like to say that it has been statistically demonstrated that if one generation of mothers fails to give their infants, and particularly female infants, food from the source which nature has designed, the next generation of mothers will have great difficulty in the natural feeding of their infants. The reverse has also been demonstrated and it has even been shown that when mothers, not fully able to supply the infant with food, have supplemented the artificial feeding as best they could with their own breast, their daughters have been able to fulfill the divine duty of nursing their infants, if not always entirely, at least to a much larger degree than the preceding generation.

Let us draw a lesson from this scientific fact which is corroborated by Nature's own laws. This lesson, once learned, the coming generation of American men and women may yet surpass all other nations in physical beauty, intellectual attainments, and moral strength.

Against postnatal infection, arising as aforesaid, from a careless mother, father or attendant, there is but one remedy, and that is education. Education of the prospective mother, education in all that appertains to the prevention of tuberculosis and other infections and preventable diseases, in schools, high schools, colleges, etc. Against the contraction of tuberculosis from infected milk our sanitary authorities should protect us. Regular tuberculin tests of all milch cows, inspection of stables, milk transportation and milk depots, should be practiced in all well-regulated communities. But we, ourselves, can protect our babies from infected milk by boiling or sterilizing the milk whenever we are not certain of its absolute purity. In this connection I can not help paying a tribute to Mr. Nathan Straus, of New York, who has done such grand and life-saving work by presenting to several communities large plants for sterilizing milk, to be distributed to the poor at cost.

In institutions for infants, isolation of tuberculous children should be practiced as far as possible. No tuberculous individual should be employed in a hospital to take care of infants, and no child should be given into the care of a family unless the hospital authorities are absolutely certain that the infant will not be attended by a consumptive.

We come now to tuberculosis in childhood, which may likewise be contracted from either tuberculous parents, tuberculous relatives, friends or boarders. A tuberculous individual living in such a home, particularly if it is small and unhygienic, need only be careless with his expectoration, and the little child, crawling on the floor, is sure to come in contact with it, touching everything with its fingers, which are often put into its mouth afterwards, or scratching its delicate skin with the infected nails. If the tuberculous sputum has had a chance to dry and become pulverized, the bacilli-laden

atmosphere, always heavier in the lower strata of the air, is sure to be inhaled by the little one. You have thus a source of infection which may cause a tuberculosis from ingestion, from inhalation, and from inoculation; in other words, the child has a chance of having its intestines, its lungs and its skin tuberculously infected at the same time.

The remedy for this lies again in education—education of the tuberculous and education of those living with them.

There is one more source of infection arising in children of which I must speak and which is often overlooked by our hygienists and social workers. I refer to the life of little ones in day nurseries. These institutions should be most carefully watched and supervised, in fact, I firmly believe that not only tuberculosis, but diphtheria, measles, and other children's diseases would be greatly diminished if our sanitary authorities would insist on a daily medical inspection of the children in these nurseries. The isolation and particular watching of tuberculous children could then be easily accomplished.

Before taking up the third phase, "tuberculosis during the school age," I would like to say one word more in regard to the management of the predisposed child, when it no longer receives the healthy mother's or foster mother's breast. In the eyes of the utilitarian or materialist, or, perhaps, also in the eyes of a certain class of sociologists, the question, how to raise a child predisposed to tuberculosis, might seem a paradox. In defense of our views in this respect, let me repeat, that while in my humble opinion it belongs to the highest mission of the physician to prevent the procreation of a tuberculous race, when in spite of his warnings and teachings, a child is born of tuberculous parents, it is his most sacred duty to do all in his power to save the child's life and, if at all possible, make it strong, healthy and vigorous; and we physicians should use the clinical experience of the best authorities to guide us in this respect.

Predisposed children are almost all born bad eaters. They will have a disinclination to many kinds of food and be often unwilling to eat when they should. Only by beginning at the earliest possible period, with a firm discipline, can these children be made to eat as other healthy children would. The old practice of folding our hands, resigning ourselves to fate, and saying that because the father or mother had tuberculosis the child must also be doomed, with our present knowledge of phthisiology, is thoroughly reprehensible. Sensible parents, even if tuberculous, can often be very helpful in combating a hereditary predisposition in their children, if able to give them proper physical and intellectual care and training, combined with good food, much outdoor life and sensible dress.

In the homes of the poor such an ideal training of the child is not always easy. French phthisiotherapeutists and philanthropists have realized the importance of caring for the offspring of tuberculous parents who would have to live in a *milieu tuberculeaux*, and have a special organization, called "Oeuvre de Prevention de l'Enfance contre la Tuberculose." This work was started by my esteemed master and teacher, the great children's physician, Professor Grancher, of Paris, in November, 1903, by a large personal gift from Mrs. Grancher and himself. It consists, in the main, in removing the children of poor tuberculous parents from the center of infection, either to good, sanitary private homes in the country or to seaside or inland sanatoria. There is no time limit; the children may stay away until, in the opinion of the supervising physician, they are strong enough to resist a tuberculous invasion. The removal of these children is, of course, always done with the consent of the parents. The first complete report of the work of this society was given out at the recent Tuberculosis Congress at Paris, and showed most gratifying results.

What are the predisposing causes of tuberculosis during the school age? Badly ventilated school rooms, overtaxing of the child's brain to the detriment of its physical development, unhygienic dress, particularly of school girls and in the poor, underfeeding, insufficient clothing and bad housing, often combined with child labor in workshop, factory and even at home.

What are the direct causes of tuberculous infection during school life? Close association with tuberculous fellow pupils; very much more rarely the carelessness of a tuberculous teacher.

To describe the various sources of infection during school life I believe I can not do better than to repeat here the little list of rules[1] which I like to see school teachers give to their pupils, and which might serve as an alphabet in the prevention of tuberculosis.

1. Every child and adult can be helpful in fighting consumption. School children can help by complying with the following rules:

2. Do not spit except in a spittoon or a piece of cloth or a handkerchief used for that purpose alone. On your return home have the cloth burned by your mother or the handkerchief put in water until ready for the wash.

3. Never spit on a slate, floor, sidewalk or playground.

4. Do not put your fingers in your mouth.

5. Do not pick your nose or wipe it on your hand or sleeve.

6. Do not wet your finger in your mouth when turning the leaves of books.

7. Do not put pencils in your mouth or wet them with your lips.

8. Do not hold money in your mouth.

9. Do not put pins in your mouth.

10. Do not put anything in your mouth except food and drink.

11. Do not swap apple cores, candy, chewing gum, half-eaten food, whistles, bean blowers or anything that is put in the mouth.

12. Peel or wash your fruit before eating it.

13. Never cough or sneeze in a person's face. Turn your face to one side or hold a handkerchief before your mouth.

14. Keep your face and hands and finger-nails clean; wash your hands with soap and water before each meal.

15. Do not kiss any one on the mouth or allow anybody to do so to you.

16. When you don't feel well, have cut yourself or have been hurt by others, do not be afraid to report to the teacher.

17. Be just as careful and cleanly about your person at home as in school.

18. Clean your teeth with toothbrush and water, if possible, after each meal, but at least on getting up in the morning and on going to bed at night.

19. Learn to love fresh air and learn to breathe deeply and do it often.

Another good method of teaching school children the prevention of tuberculosis has been inaugurated in France, in a most ingenious way. My distinguished teacher, Professor Letulle, suggested to the minister of education of France that the coverings of the books used by school children might serve as a means of instructing the pupils concerning the prevention of tuberculosis. He, himself, wrote two pages of instructions for the pur-

1. My inspiration to compile this set of rules I received from a little leaflet which I came across during my visit at Providence. I have since learned that they were written by Prof. Theobald Smith of Harvard, who wrote them at the suggestion of Dr. Chapin of Providence, R. I., and I am anxious to give these gentlemen credit for their work. I have ventured to make some additions and some changes in order to cover the entire ground of first principles in the prevention of tuberculosis.

pose. The outside cover represents the exterior of a sanatorium, and the text is illustrated by a number of pictures. Permit me to give you here the translation of the subjects which are treated in a most concise and comprehensible way on these two pages:

"The air we breathe and the respiratory organs."
"Tuberculosis decimates humanity."
"Tuberculosis is contagious."
"Tuberculosis and its microbe."
"Robert Koch, the discoverer of the microbe of tuberculosis (consumption)."
"Tuberculous infection from man to animal and from animal to man."
"Tuberculosis can be prevented."
"Sure way to prevent consumption."
"Never use strong drinks."
"Tuberculosis can be cured."
"Tuberculosis is a social disease."

To remove all possible causes which might render a child susceptible to the invasion of tuberculosis during school life, we must appeal to school boards, superintendents, teachers, and school physicians to do all in their power. Permit me to quote here what I said on this subject in an address delivered last year before the American Academy of Medicine. The school board, or board of education, as it is called in some localities, should, in choosing a sight for a school, bear in mind that, whenever possible, a somewhat elevated region, where the streets are wide and the surrounding houses not too high and not too close together, and where the traffic is not too heavy, should be selected in building a public school. About the construction of a modern and model school house much could be said. The essentials of such construction are well known to all sanitarians and up-to-date architects. In relation to the prevention of tuberculosis, I would suggest only a few points. Where the site or locality does not permit of having a large playground, a roof garden, which can be covered in winter, is absolutely necessary. Instead of our American windows, which can only be opened to one-half of their extent, I should wish to see French windows in every school house, or windows sliding in the wall, or those that turn on a pivot, all of which permit twice the amount of foul air to go out and of good air to come in, that our ordinary windows do. Heating and general ventilation of school rooms should, of course, be of the most improved kind. The walls and woodwork of school rooms should be plain, to make the accumulation of dust virtually impossible and the cleansing easy. All corners should be rounded off and the walls painted. The interior equipment—that is to say, the school furniture, benches and desks—should be so arranged that they can be easily moved or folded together, so that a thorough cleaning of the floors is made possible after each daily session. It goes without saying that the drinking cup should be replaced by the hygienic drinking fountain, which makes the use of a cup unnecessary, and thus eliminates one method of transmission of microbic diseases.

Every public school should have a well equipped gymnasium and a swimming tank with constantly running fresh and salt water, warmed to a suitable temperature in winter. Each pupil should be given the opportunity to bathe several times during the week. To learn to swim should be made obligatory and every class should be supervised by a competent swimming master. Leaving aside the great hygienic gain to be derived from such an installation, especially when the pupils are recruited from homes where bath rooms are rare and where regular bathing is considered superfluous, the swimming lessons would be of value to every boy and girl, and in case of such disaster as the recent Slocum tragedy there would be a much smaller loss of life. There is hardly a college in existence in America where the gymnasium and the swimming tank do not form an important part of the equipments, and a college without them would surely suffer in prestige. The public school, where the children of the masses receive their education, should not be behind the private college in its equipments.

I am convinced not only that the public school, which has a well-equipped swimming establishment and which makes regular bathing and instruction in swimming obligatory for every pupil, will have fewer cases of infectious and contagious diseases, particularly scrofula and tuberculosis, but that the intellectual and moral status of its pupils will also be higher.

The duties of the superintendent of a public school in the prevention of tuberculosis are manifold. In arranging the curriculm he should bear in mind never to push the intellectual training to the detriment of the bodily development or physical welfare of the children in his school. There has been, and is yet, altogether too much overtaxing of the brain and the nervous system of our boys and girls in public and also in private schools. Our gynecologists and nerve specialists have given us enough illustrations of the detrimental effects of the overtaxing and overstraining of the mind and the nervous system of young girls at the age of their development into womanhood. Many of our college pupils, male and female, do not get enough rest, they are overworked and underslept. Those of us who have given tuberculosis a somewhat closer study also know that it is often at the period of entering puberty that the predisposed individual becomes most susceptible to the invasion of the bacillus, particularly when additional strain is put on the physical or mental system. This holds good of both sexes. A judiciously divided curriculum, intercepted with gymnastics, swimming and as much outdoor instruction as possible, would seem to me a most important factor in the prevention, not only of tuberculosis, but of all indoor diseases and nervous troubles.

By outdoor instruction I mean not only botanizing tours and geological excursions, but also outdoor singing and outdoor recitation. In my textbook on tuberculosis[2] (as well as in my article on the subject in the Twentieth Century Practice of Medicine[3]), I quoted Barth, of Koslin, who had made a careful study of the effects of singing on the action of the lungs, on diseases of the heart, on the pulmonary circulation, on the blood, the vocal apparatus, the upper air passages, the ear, the general health, the development of the chest, and the activity of the digestive organs. As a result of his studies he came to the conclusion that singing should be considered one of the exercises most conducive to health. I am willing to go even further and say that outdoor singing and outdoor recitation, when the weather is neither too windy nor too cold, is a most excellent means of preventing the development of pulmonary diseases. You have all heard of the numerous cases of open-air speakers, such as political campaigners, evangelists, etc., having developed their respiratory capacities and strengthened their lungs as a result of their peculiar profession. Some even profess to have been cured of consumption as a result of

2. "Pulmonary Tuberculosis. Its Modern Prophylaxis and the Treatment in Special Institutions and at Home," P. Blakiston's Son & Co., Philadelphia.
3. Twentieth Century Practice of Medicine, Vol. xx, p. 230.

their outdoor speaking. The German military authorities, who have the reputation of instituting all exercises which tend to prevent disease and invigorate the soldiers, have of late much encouraged singing during the marching of the troops.

To every class in the public school opportunity should be given in fairly good weather to have recitation and singing at least once a day in the playground, adjoining garden, or roof garden. Breathing exercises should, of course, be instituted for at least a few minutes at a time during recess for all classes. This should be done either in the open air or when the windows are wide open, and a number of times each day. The simple breathing exercises which I recommended as a prevention of pulmonary diseases, I have published and illustrated in my books, as well as in various articles, and also in my popular essay on tuberculosis,[4] and I do not feel that it will be necessary to describe them here again. The selection of rational textbooks on physiology and general hygiene must be left to the good judgment of the board of education and the superintendent.

The duties of the superintendent and those of the school teacher are, of course, interdependent. The former makes out and supervises the curriculum, the latter carries it out. The lessons in physiology and hygiene must be adapted to the age and understanding of the pupils. The school teacher should, of course, be familiar with all the practical and feasible methods in vogue in regard to the prevention of tuberculosis as an infectious and communicable disease.

Before closing the paragraph on the prevention of tuberculosis during school age, I must call your attention to the term scrofulosis, which really means tuberculosis in a milder form, and which is particularly frequent among school children in the districts of the poor and is the result of bad housing and particularly of underfeeding. To prevent scrofulosis—the milder form of tuberculosis—I must revert once more to the duties of the school board, for what can the teacher or superintendent do with the underfed children of the poor attending our public schools? Breathing exercises will not supplement their lack of food, but, if anything, they will increase the appetite of the pupil, and an apple and a cracker are not enough for a growing boy or girl and altogether too little to make their cheeks red. I would, therefore, suggest to the board of education a philanthropic enterprise in which the generous and good-hearted people of every city would most gladly join. It may thus become possible to provide these half-starved little ones with a luncheon of a few meat sandwiches and one or two glasses of good milk, and I am convinced that fewer will develop tuberculosis and scrofulosis, and they will do better work at school and at home. To avoid a pauperizing tendency a few pennies may be charged for these lunches. If I have been well informed, I believe this practice is in vogue in Boston, Milwaukee and a few other cities. I do not know whether statistics have been kept regarding the results, but I know that in some European cities the persistent administration of a nutritious luncheon resulted in the physical and intellectual improvement of the children and a considerable gain in weight. You see thus that in school children, tuberculosis has a very decided social aspect.

One more word on the duties of the school physician, and, of course, every school should have one or several. These duties should consist in the constant supervision of the sanitary condition of the school buildings; regular visits to the gymnasium and the swimming school, and, lastly, the most important function of all, the monthly weighing of the pupils and the periodic examination of the chests of all pupils, teachers and employés of the school. The weeding out of all such individuals as might constitute a source of infection, or those whose treatment becomes an imperative necessity, and the advice to be given to parents of a tuberculous child, will make the school physician a most important factor in the solution of the tuberculosis problem.

It goes without saying that the school physician, who must devote so much time to this duty in order to do it faithfully, should receive ample remuneration for his service.

I do not wish to have it understood that our public schools and kindergartens are the only institutions which need sanitary supervisions. Boarding schools, parochial schools, seminaries, etc., need often the watchful eye and frequent visits of a trained sanitarian just as much, if not more, in order to prevent the spread of tuberculosis and other infectious diseases.

Before leaving the subject of tuberculosis in schools it is but right that we should devote a few earnest words to the subject of "What to Do with the Tuberculous School Child and the Tuberculous School Teacher." Permit me to quote here from a recent address which I delivered before the teachers of the public schools of New York at the occasion of the American Tuberculosis Exhibition held under the auspices of our national and our New York anti-tuberculosis associations. A number of states have taken very radical measures in this respect. My interest in the subject was first aroused by a letter received last February from my friend, Dr. Herbert Maxon King, the physician-in-chief of the Loomis Sanatorium at Liberty. He sent me a clipping announcing the decision of the board of education of Jersey City that no teacher having consumption would hereafter be allowed to teach in a public school. In commenting on this decision, Dr. King said: "It occurs to me that if such action shall be taken on the part of the various boards of education throughout the country much injustice is going to be done." Since then the states of Iowa[5] and Illinois[6] have joined the list of those that exclude tuberculosis from the public schools, and these boards have issued an order notifying the superintendents of schools throughout the state to exclude all teachers, pupils and employés suffering from the malady. They exclude the teacher, and they exclude the child, and I approve of this decision, but I must ask, Have those states which exclude the tuberculous teacher, who nine times out of ten has contracted this disease in the performance of his or her duty, provided a pension for her, so that she can devote a year, perhaps more, to doing nothing but getting well? Or has she been able to accumulate enough means to live the rest of her life without care in case she is not entirely cured and readmitted in the school? I doubt if this will be the case in many instances.

A French commission was recently appointed to look into this matter and they recommended that all tuberculous school teachers employed in the Republic of France should receive for at least three years a sum sufficiently large to provide for proper sanatorium treatment at home, and this without losing the right to be pensioned later on.

4. "Tuberculosis as a Disease of the Masses and How to Combat It." M. Firestack, 139 East Seventeenth St., New York, Publisher.

5. According to the Med. Record, Nov. 25, 1905.

6. According to the Med. News, Dec. 30, 1905.

And what is done in our American schools for the children who are tuberculous? How many seaside or inland sanatoria for tuberculous children have we where the child can become cured of its infirmity and concomitant with its physical improvement receive its intellectual education? We in the great city of New York have just one seaside sanatorium for tuberculous children which fulfills this mission, but its capacity is limited to 54 beds, and we have in New York about six thousand tuberculous children needing sanatorium treatment.

I approve of weeding out tuberculous children and the tuberculous teacher from our public schools, but I also believe that it is our most sacred duty to provide for these tuberculous teachers and tuberculous children. Let us multiply our sanatoria for children and employ in them as many teachers as we can from the unfortunate ones who have contracted tuberculosis.

Now, what are we to do with the rest, who can not find employment in these institutions? One of our most beloved, large-hearted and generous philanthropists and distinguished fellow-townsman, Mr. Andrew Carnegie, recently created a fund to pension teachers in academic schools who are beyond a certain age and no longer able to earn their livelihood. Mr. Carnegie very justly surmised that our college professors are, as a rule, too poorly paid to accumulate a sufficient fortune to live in comfort during their reclining years. This is a grand and beautiful philanthropy, and I sincerely hope that the example of Mr. Carnegie may be emulated by other philanthropists; but I hope and pray that in the future gifts for pensioning educators our ordinary school teachers will not be forgotten. They must have served at least twenty years before they are entitled to any pension, and then it is but small.

Then they, too, have often very little chance to accumulate enough to enable them to live in comfort during old age; and I am certain that when misfortune strikes one in the prime of life, when the school teacher contracts tuberculosis and must leave the school, nine times out of ten she will have very little or no money saved. Yet it costs money to provide for at least a year in which to cure a tuberculous patient, and it requires even more to make him comfortable when he is not curable, but is forced to live in idleness for two years or more. Let the municipality which excludes the tuberculous teacher and the tuberculous child provide school sanatoria for the children and, whenever possible, employ therein the tuberculous teachers in the earlier stages of the disease. Let our good and generous fellow citizens who love to devote part of their wealth to the relief of the suffering and misery of their fellowmen remember in their benefaction the school teacher who has had the misfortune to contract consumption. Whether such a benefaction be in the shape of a special sanatorium for tuberculous school teachers or a special fund whereby these school teachers can be sent to existing sanatoria, or be treated at home, is immaterial.

What need have I, before an audience of this kind, to speak of the baneful influence of child labor? A few states of the Union have endeavored to do their best in enacting and enforcing laws against this shameful practice. But there is yet much to be done. Let all American legislatures understand that nothing predisposes a child's delicate and growing organism to tuberculosis more than the great physical strain produced by hours, and often long hours, of indoor labor, which time the child should spend in play outdoors. Child labor makes physical and nervous wrecks of normal children, and because of its influence on the nervous system of the growing boy and girl I hold child labor responsible for a good deal of alcoholism among our young people.

President Roosevelt, in his recent message at the opening of the last session of Congress, recommended in strong terms a model child labor law, in order that Congress might set a worthy example to the states in which it has no power to legislate on this subject, by wise and discriminating legislation for the District of Columbia, over which it has the necessary power.

Permit me to read to you a few suggestions from an appeal issued recently by the National Child Labor Committee,[7] which, I think, speak for themselves:

> We request the friends of the 29,000,000 children under 16 years of age in the United States, for whose industrial guardianship and for the protection of whose rights to healthy physical development, education and leisure the national committee is organized, to co-operate in recommending this bill to the favorable attention of their members in Congress. It will mean much for our cause in every state to have at the national capital a reasonably strong and fair law on the subject of child labor. Members and friends of local child-labor committees, of educational, charitable and philanthropic societies, of women's clubs and all other organizations interested in this movement are earnestly requested to write at once to their respective senators and members of Congress, sending them, if possible, the inclosed copy of the bill to be presented and urging the passage of this bill.

There is, of course, also a kind of child labor at home for which school superintendents, teachers or parents are alone responsible. When the child is given too many lessons to study at home so that it must rise very early or can only retire at a late hour, the result on its nervous and general system is the same as child labor performed in a factory or shop. Like the overworked college student above referred to, those children do not sleep enough. They are habitually in the want of sleep. Children up to the age of 16 should have nine hours' sleep in summer and nine to ten in winter. This certainly offers a field for reform in arranging the curricula of our public schools.

One of the saddest forms of child labor is the one imposed on the child of thoughtless parents who, in addition to the school lessons at home, expect their children to devote nearly all their time, which should be spent in play or recreation, to helping in the household.

I have seen so-called "little mothers" in our New York tenement homes who were veritable heroines and who sacrificed their little lives on the altar of devotion to their little brothers and sisters and in obedience to their thoughtless and often cruel parents. I have seen a widower leaving a 10-year-old daughter to take care of three smaller children, one a babe, and expecting her to do the cooking besides. Is it a wonder that such a child can not resist the invasion of the tubercle bacilli so prevalent in the crowded tenement districts of our large cities?

To treat the children of the poor when they are afflicted with tuberculous and scrofulous diseases, the seaside sanatorium, as has been said, is the ideal place, but inland sanatoria will also answer the purpose if the coast is at too great a distance. It goes without saying that a school should be attached to every sanatorium for children so that the intellectual training keeps pace with the physical improvement of the sanatorium inmate. The results obtained in these children's sanatoria are surprisingly good: they vary from 50 to 75 per cent. of cures.

7. This appeal was accompanied by a copy of a most excellent bill proposed to regulate the employment of child labor in the District of Columbia.

The great social and economic advantage resulting to a community which takes care of the tuberculous and scrofulous children of the poor must be obvious. Such a sanatorium not only spares the community the expense of taking care of more consumptive adults, because of the cures accomplished among the children, but it lessens the number of crippled, deformed and helpless individuals. Every case of Pott's disease cured, means a hunchback less in the world; every case of tuberculous hip or knee joint cured means a well person and a bread winner, instead of a cripple who is likely to become a pauper.

The dangers of contracting tuberculosis during the age of adolescence in college or high school are about the same as those during the school age. I have already referred to the detrimental effects of overtaxing and overstraining the mind and nervous system of young girls. The young man choosing a college career should bear in mind that, while a reasonable amount of athletics are conducive to health, physical overtaxing is a strong predisposing factor to tuberculosis, and, strange as it may seem, when the overtrained athletic contracts tuberculosis, the disease more frequently takes an unfavorable turn than in other instances. I have examined a number of men, recently from college, who had distinguished themselves as athletes, and, as a rule, I had the painful experience of finding them in worse condition to battle with the disease than individuals who had never practiced athletics. The remedy for all this lies, of course, with the college authorities who should regulate the sports so that they may become a benefit and not a detriment to the students.

The young man or woman who is obliged to go to work in a shop, factory, office or store in order to make a living has the same risk of contracting tuberculosis as the adult. However, even close contact with a tuberculous individual is not dangerous if the latter is trained to take care of his tuberculous sputum and is careful to hold his hand or handkerchief before his mouth when coughing, even when he does not expectorate, so as to prevent the droplets or the possibly infectious spray from doing any harm. Right here I wish to state distinctly that the conscientious consumptive is as safe an individual to associate with as any healthy person. To treat the conscientious consumptive as an outcast is cruel and most inhumane, and phthisiophobia, that is to say, the exaggerated fear of the presence of the consumptive, is a disease which all, social workers and physicians, must combat. Let us teach the masses and the individual consumptive the effective and yet so simple means of preventing the dissemination of consumption through carelessness. Teach them never to expectorate except in a proper receptacle, never to cough unless it is really necessary, and then always to hold the handkerchief or the hand before the mouth. Let our sanitary authorities, our railway and street car companies see to it that in every public place where people congregate a sufficient number of well-kept spittoons are provided. Let them, furthermore, change the wording of the formula, "Don't spit," which, as we know only too well, is frequently disobeyed, to the formula, "Spit here."

Our factories, workshops, the notorious sweatshops, our offices and department stores, and smaller ones also, our railroad stations and trains should receive the visits of sanitary inspectors so that it may be assured that the men and women employed or congregating in them are reasonably protected from the diseases arising through bad ventilation and other insanitary conditions.

To improve the hygiene in the homes of the poor and prevent as far as possible the propagation of tuberculosis through dust, I beg leave to reproduce here some rules which, on the suggestion of our distinguished co-worker, Prof. T. Mitchel Prudden, were issued by our New York Committee on the Prevention of Tuberculosis.

SWEEPING AND DUSTING.

When you sweep a room raise as little dust as possible, because this dust when breathed irritates the nose and throat and may set up catarrh. Some of the dust breathed in dusty air reaches the lungs, making parts of them black and hard and useless.

If the dust in the air you breathe contains germs of consumption—tubercle bacilli—which have come from consumptives spitting on the floors, you run the risk of getting consumption yourself. If consumptives use proper spit-cups and are careful in coughing or sneezing to hold the hand or handkerchief over the nose and mouth so as not to scatter spittle about in the air, the risk of getting the disease by living in the same rooms is mostly removed.

To prevent making a great dust in sweeping, use moist sawdust on bare floors. When the room is carpeted, moisten a newspaper and tear it into small scraps and scatter these over the carpet when you begin sweeping. As you sweep, brush the paper along by the broom and they will catch most of the dust and hold it fast, just as the sawdust does on bare floors. Do not have either the paper or the sawdust dripping wet, only moist.

In dusting a room do not use a feather duster, because this does not remove the dust from the room, but only brushes it into the air so that you breathe it in, or it settles down and then you have to do the work over again.

Use soft, dry cloths to dust with, and shake them frequently out of the window, or use slightly moistened cloths and rinse them out in water when you have finished. In this way you get the dust out of the room.

In cleaning rooms you should remember that dust settles on the floors as well as on the furniture, and is stirred into the air we breathe by walking over them. You can easily remove all this dust in rooms which have bare floors, in houses, stores, shops, schoolrooms, etc., after the dust has settled, by passing over the floor a mop which has been wrung out so as to be only moist, not dripping wet.

One of the strong predisposing factors to an acquired tuberculosis in adult life is always the fearful scourge, alcoholism. How to combat this is in itself a problem. I confess that, to my mind, the only rational way is to follow the example of Norway and some of the Cantons of Switzerland by making the manufacture and sale of alcohol a government affair. Experience in these countries has shown that through such means alone have they been able to reduce alcoholism and its consequent evils—disease, crime, poverty, misery, and want.

Educational propaganda regarding alcoholism will also be helpful. Concerning tuberculosis it should be impressed on the masses that alcohol, in whatever form it may have been administered, has never been either a prevention or a cure for consumption. Since we have not yet any laws prohibiting the sale of patent preparations and proprietary medicine containing a large percentage of alcohol and other deleterious substances under the guise of medicine, we must educate the people to the true state of affairs.

For the benefit of the statesman, legislator and the clergyman who recommend, the public press which lends its columns to advertise, and the people who consume, "patent medicines," I would like to make a few quotations from important authorities on the subject:

Mr. Adams, in his second article[8] on "The Great American Fraud," entitled "Peruna and the Bracers," has this to say on the manufacture of Peruna:

8. Collier's Weekly, Oct. 28, 1905.

Any one wishing to make Peruna for home consumption may do so by mixing half a pint of cologne spirits, 190 proof, with a pint and a half of water, adding thereto a little cubebs for flavor and a little burned sugar for color. Manufactured in bulk, so a former Peruna agent estimates, its cost, including bottle and wrapper, is between 15 and 18 cents a bottle. Its price is $1.00. Because of this handsome margin of profit, and by way of making hay in the stolen sunshine of Peruna advertising, many imitations have sprung up to harass the proprietors of the alcohol-and-water product. Pe-ru-vi-na, P-ru-na, Purina, Anurep (an obvious inversion), these bottled and labeled to resemble Peruna, are self-confessed imitations. From what the Peruna people tell me, I gather that they are dangerous and damnable frauds and that they cure nothing.

What does Peruna cure? Catarrh. That is the modest claim for it—nothing but catarrh. To be sure, a careful study of its literature will suggest its value as a tonic and a preventive of lassitude. But its reputation rests on catarrh. What is catarrh? Whatever ails you. No matter what you've got, you will be not only enabled, but compelled, after reading Dr. Hartman's Peruna book, "The Ills of Life," to diagnose your illness as catarrh and to realize that Peruna alone will save you. Pneumonia is catarrh of the lungs; so is consumption. Dyspepsia is catarrh of the stomach. Enteritis is catarrh of the intestines. Appendicitis—surgeons, please note before operating—is catarrh of the appendix. Bright's disease is catarrh of the kidneys. Heart disease is catarrh of the heart. Canker sores are catarrh of the mouth. Measles is, perhaps, catarrh of the skin, since "a teaspoonful of Peruna thrice daily or oftener is an effectual cure."

Prof. A. Jacobi of New York City, my venerable friend and the teacher of thousands of American physicians for the past fifty years, has come to the conclusion, from a careful estimate, that the American people spend an average of $200,000,000 a year for "patent medicines."

Prof. Oliver T. Osborne of Yale, in his address[9] on "The Scourge of Nostrums, Etc.," expresses himself regarding the public press and "patent medicines" as follows:

Were it not for the daily papers and periodicals this enormous sale of "patent medicines" could not take place. This autosuggestion of disease and disease symptoms, and then the positive promise of cure causes frail human nature to give the stuff a trial, and as is expected, the narcotic and the alcohol gives a taste for more.

According to a statement published in connection with Mr. Adams' article, Dr. Ashbel P. Grinnell of New York City, who has made a statistical study of "patent medicines," asserts as a provable fact that "more alcohol is consumed in this country in 'patent medicines' than is dispensed in a legal way by licensed liquor venders, barring the sale of ale and beer."

Next to alcoholism, insanitary tenements and lack of air and light are the strongest predisposing factors to tuberculosis. The building of model tenement houses where the honest laborer may have a cheerful home at a reasonable rate, the creating of tenement house commissions in large and smaller cities to compel greedy contractors to remodel insanitary tenement houses and build only sanitary ones is one way of combating this evil. Not enough praise can be bestowed on men like Mr. Phipps and others who devote their wealth to the building of sanitary homes for laborers. These are certainly more needed than monuments, libraries, general hospitals, and even churches. To me the man who builds such homes which render thousands of American laborers and their families happy serves his Creator better than the builder of cathedrals and churches, for the former serves God by serving his fellowmen, and if we are to believe the beautiful story told us of Abu ben Adhem

'Midst those whom love of God has blessed
The lover of his kind leads all the rest.

I have always maintained that if we can give the honest laborer a cheerful home and a wife who knows how to cook a good, plain but appetizing meal the saloon with its bright lights will have less attraction to him and alcoholism will be indirectly combated. When duty calls me into the houses of the poor, and I see the dingy, untidy rooms of the laborers and the woman unskilled in the plainest household duties, getting the meals from the nearest delicatessen store instead of preparing them herself, I do not blame the laborer when, instead of returning directly home from his occupation, he enters the saloon to take a drink, thinking it will cheer him up. The laborer's wife who, after leaving school, had to enter the workshop or store, and thus never had a chance to learn to cook or learn the first principles of housekeeping, is not to blame for her ignorance, but society is, and we should seek to remedy such conditions by not allowing our girls to leave the public school without having learned to be housekeepers and cooks.

It would, furthermore, pay economically and socially if our philanthropists and communities would establish places of amusement where a man might go with his family to sepnd his leisure time, partake of non-alcoholic drinks and enjoy good music or other healthful amusement. All this will help to strengthen family ties, prevent alcoholism, and indirectly prevent tuberculosis and other diseases.

In most of our cities we need more parks, large and small, more playgrounds, more recreation piers and public roof gardens. These places represent the lungs of a great city; without them a city can not be in a healthy condition. Sanitary houses, public baths and healthful places for amusement are, however, not only necessary for our city population, but are equally important for people living in the country. Home sanitation, love for fresh air, general and personal hygiene, must be taught to the country people as well. They have the good air of the country, but how often do they shut themselves up in badly ventilated rooms, being more afraid of fresh air than even city people, fearing the little draught—the only way of purifying foul air—as if it was disease producing. The lack of healthful amusement in the country is the cause of so many young people migrating to the cities. Here is a new field of philanthropy. The man who, by creating a system of healthful amusements for country people, can stop the ever-increasing migration to the cities, or perhaps even induce laboring families to migrate from ou crowded cities to the country, will bestow a lasting benefit on present and future generations.

If we wish to diminish tuberculosis among the masses, we must pay our laborers in city and country reasonable wages so that they can live decently, eat sufficient good and nourishing food, and provide food and shelter for themselves and families for a time when work is lacking. Labor bureaus should be established everywhere by states, cities and smaller communities. There should be constant interchange between all of them so as to regulate the demand and supply as far as practicable. Then the abnormality that one section of the country suffers from the want of laborers while another has an army of "the unemployed" will be a thing of the past. Some man or woman having been cured of pulmonary tuberculosis may find outdoor employment through such an

9. "The Scourge of Nostrums and Irregular Practitioners," THE JOURNAL A. M. A., July 2, 1904.

exchange which will insure his or her recovery and guard against a relapse which often follows from a return to insanitary environments. Our federal government could materially help these labor exchanges in their grand work by arranging for cheap transportation whenever it seems expedient to do so.

In relation to employment, travel and transportation, there comes to my mind another means of contagion which I consider dangerous, and that is dust. We are in the habit of calling tuberculosis a house disease, and well it deserves this name, but it might also be called a dust disease, and we will not be able to eradicate tuberculosis if we do not find means to lessen the amount of dust we breathe. Even so-called non-infectious dust is apt to irritate the pulmonary surface and thus make the respiratory system more receptive to the invasion of the bacillus. The dust uselessly raised in our factories and workshops could be materially lessened by automatic dust-collectors. The cleaning of such establishments, and also department stores, churches, theaters, concert halls, offices, schools, railway stations and railroad and street cars, should not be done in the old-fashioned way with a broom, but by the modern electric-exhaustion process now in use in some establishments, which is certainly far superior and thoroughly hygienic. The same process of cleaning should be employed for carpets in preference to beating them in the back yards in closely settled communities. Sweeping a street in its dry state should be considered a municipal crime, and the same holds good of the collecting of ashes in uncovered carts.

What to do to prevent the dust raised by speeding electric street cars and automobiles is indeed a difficult problem. Our fellow citizens on the Pacific Coast have used an oily substance to allay the dust. I submit this problem to the street-cleaning commissioners and city engineers of our great Eastern cities in the hope that their ingenuity may find a solution.

The dust in a railway car could be greatly minimized by proper ventilation and the more simple construction and equipment of sleepers and passenger coaches. But in addition to this a regulation should be enforced which will make it punishable by dismissal for any colored porter to brush a passenger about to leave the car in the presence of the others. To my mind it is an unpardonable offense on the part of any company not to prevent this practice of their employés who, as we all know, resort to it in order to solicit a gratuity. I have been told that the wages of colored porters on Pullman and parlor cars are so small that they must rely on an additional source of income from "tips." I do not know whether this is so or not, or whether the companies, the porters or the passengers are to blame, but tipping the colored porter has become habit with the American public and would probably be difficult to stop. However, I think a rule that brushing garments should only be allowed in the vestibule of the cars should be enforced.

Dust-collectors should be an obligatory equipment in the workshops of our prisons. In a recent investigation of some of our penal institutions I found a deplorable state of affairs in regard to this, besides the many other unhygienic conditions tending to propagate tuberculosis which I had occasion to observe.[10]

No matter how serious a crime the individual may have committed, society has no right to add to years of imprisonment additional punishment by giving the individual tuberculosis through unhygienic prisons and workshops.

In speaking of the social aspect of tuberculosis we can not overlook the tuberculosis situation in prisons and reformatories. Isolation and treatment of tuberculous prisoners in special wards or agricultural colonies are some of the means which must be resorted to to diminish consumption among this class of people. Some prisoners return to their families, and this would be undesirable had they become tuberculous or had they not been treated and cured of the disease. The practice of discharging prisoners in the last stage of tuberculosis, often virtually dying, without previous investigation to see that the freed individual will find a home where he will not constitute a source of infection and receive proper medical care, is thoroughly reprehensible.

What is the social duty, the duty of a community in regard to the average individual afflicted with tuberculosis? The rich consumptive will be able to take care of himself; he can be cured at home, in health resorts, or private sanatoria; but for the comparatively poor, or middle classes, there should be institutions where, for a moderate price, equally good chances for cure can be offered. No community has a right to pauperize its citizens; many are willing to pay, and he who can pay but will not should be made to pay. We have in this country a number of high-priced institutions and a number of purely charitable institutions, while for the middle classes and for the more advanced cases of consumption we have virtually nothing. There should be a sufficient number of city and county sanatoria to take in the moderately and absolutely poor consumptives in all stages of the disease. That it is cheaper to take care of a consumptive at the right time and in the right place until he is well, instead of taking care of him at the wrong time (in the advanced stage) and at the wrong place (general hospital) until he is dead has been often enough demonstrated not to need any further proof.[11]

But how are we to discover a patient at the right time? By educating the public in the early signs of tuberculosis, by establishing special tuberculosis dispensaries, by having periodic examinations of the chests of all public employés, pupils of public and private schools, colleges, etc., by urging the well-to-do to employ a family physician not only to take care of them when they are ill, but to watch over them while well and examine every member of the family from time to time so as to discover an early tuberculosis if such is developing. The special tuberculosis dispensary will serve the poor for the purpose of seeking early advice. Although I hope that at not too distant a time communities will realize that it will pay them to pay physicians, each one to be assigned to a number of poor families as a healer and a teacher, that is to say, to cure and to prevent disease.

If, furthermore, we could imitate the German state invalidity insurance companies, I think we would make a good step forward toward the betterment of the lot of our working population and make a wonderful stride toward the solution of the tuberculosis problem. Every laborer and employé in the German empire earning less than 800 marks must be insured against accident, old age and disease, including tuberculosis. The German insurance companies, under state supervision, soon realized that the earlier they took care of the policy holders who happened to become tuberculous the greater was the chance of their cure and the smaller the expense to the company. They urge their policy holders, at the slightest indication of pulmonary trouble, to go to the physi-

10. "The Tuberculosis Situation in Penal Institutions," Medical Record, May 13, 1905.

11. John H. Pryor, M.D.: "What Shall the State Do for the Consumptive?" Medical News, October, 1900.

cian paid by the company, for examination, and tuberculosis is thus discovered very often in the most incipient and consequently the most curable stage. The patient is then sent to a sanatorium, very often built and maintained by the insurance company, near large centers of population and independent of climatic conditions. Nevertheless the absolute and lasting cures often amount to 75 and 85 per cent. In the meantime the family of the consumptive laborer is looked after so that they may not be in want.

What is the social aspect, the social advantage of such an institution, which the Germans very justly call a *Volksheilanstalt*—a people's healing institution, or sanatorium? Time does not permit me to dwell at length on all that is accomplished by the sanatorium in regard to the social aspect of the disease under consideration. I had the honor, a few months ago, to address the Tuberculosis Congress in Paris on the subject of "The Sanatorium for Tuberculous Patients and Its Medical and Social Mission." Let me recapitulate rapidly the essential points of the latter, that is to say, the social mission, which I enumerated in that address.

By the admission of a patient to a sanatorium a frequently dangerous center of infection is made inoffensive and the patient is given the greatest possible chance of cure. If he is in the advanced stage he is made as comfortable as lies in the power of human skill with all the modern therapeutic means at command. The statistics of sanatoria show that the careful and trained consumptive is no danger to his immediate surroundings and the sanatorium no danger to the neighborhood. The contraction of tuberculosis by physicians, nurses and employés in sanatoria is of the rarest occurrence. The tuberculosis mortality in villages surrounding well-conducted sanatoria decreases because of the imitation by the inhabitants of the example in cleanly habits set before them by the inmates of the sanatorium.[12] The sanatorium cures the consumptive whenever he is curable and thus demonstrates the curability of the disease independent of climatic conditions. This is important when we consider that the majority of patients must be treated and cured in the same, or nearly the same, climate, in which they have to live and labor after their restoration to health. This cure is not established by quacks, "patent medicines," faith cure, or other mysterious means, but simply by the judicious use of God's fresh air, sunshine, good food, pure water, and sometimes a little medicine, and all under the careful guidance of a competent physician. The sanatorium makes the patient a hygienic factor when he returns to his former environments and thus demonstrates the preventability of tuberculous diseases. The patient has been taught the love of fresh air by day and by night, taught to shun vitiated atmosphere and the air of the saloon and of crowded meeting places. He has learned the value of simple, pure and good food, and how much more advantageous it is for him and his family to spend his money for food instead of for intoxicating liquors.

In the private as well as in the people's sanatorium there is much opportunity for cultivating compassion, benevolence and true democracy. It was my good fortune, ten years ago, when serving as assistant to my immortal teacher, Professor Dettweiler at Falkenstein, to see the birth of the first sanatorium for the consumptive poor. The wealthy and aristocratic patients at Falkenstein, being so much benefited by their sojourn there, manifested a deep feeling for the sufferings of the consumptive poor, deprived of the care and comfort of institutional treatment. They collected a large fund which became the nucleus of the largest people's institution in Germany, now located at Ruppertshain.

Many of these people's sanatoria give their patients educational advantages through lectures and regular classes of instruction. Some of our American sanatoria, I am happy to say, have imitated this good practice.[13] The young medical man, entering the sanatorium as assistant, is given an opportunity to become a trained diagnostician of incipient tuberculosis. The addition of such a physician to a community means a great step toward the solution of the tuberculosis problem. Do not consider me too sanguine if I say the sanatorium teaches true democracy, compassion and benevolence to the aristocratic, the rich and indifferent. It teaches the intemperate to become temperate, the disorderly to become orderly. It offers opportunity for education to the uneducated, and by teaching its inmates personal and general cleanliness and hygiene and love for fresh air it not only indirectly prevents tuberculosis, but also many other diseases whose origin must be traced to lack of fresh air, to filth, bad food, insanitary habitation, and bad habits.

Let me conclude this altogether too lengthy paper by saying that, to my mind, the solution of the tuberculosis problem means the solution of the social problem. Whatever prevents the development of tuberculosis will prevent social misery, whatever cures it will help to cure the social ills. Inasmuch as we diminish tuberculosis among the masses we will diminish suffering, misery and social discontent, and when the problem of tuberculosis shall have been solved we shall be nearer the millennium than we have ever been before.

16 West Ninety-fifth Street.

12. This is shown by statistics of Goerbersdorf and Falkenstein in Germany and in Rutland, Mass.

13. In the Muskoka Sanatorium, a Canadian institution, Dr. Elliott takes his patients on botanizing tours and geological excursions. A botany club has recently been formed at the Adirondack Cottage Sanatorium with a view to entertaining and instructing the tuberculous invalids of that institution.

Original Articles

BENNETT'S FRACTURE.

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In the president's address before the Section on Surgery of the British Medical Association, 1885, Edward H. Bennett, professor of surgery in Trinity College, Dublin, drew attention to a fracture at the base of the first metacarpal bone, the first note on which he had published in 1881.[1] In a series of museum specimens he had found six of these lesions; in all the injury was the same, an oblique fracture in which the palmar half or more of the surface articulating with the trapezium was detached, the shaft of the bone slipping upward past this detached fragment, thus simulating in the living a backward subluxation. Bennett described the injury as a "Stave of the Thumb," and this name is particularly appropriate.

My attention was first called to this fracture a little more than a year ago, and, from the paucity of literature at my command on the subject, and my own limited experience, I was led to believe that it was very

1. Bennett: Dublin Journal of Medical Science, vol. lxxiii, p. 72; British Med. Jour., Aug. 1, 1885, p. 200; ibid., July, 1886, p. 13.

uncommon. In an article[2] lately published, I reviewed my two cases and stated my conclusions. During the past year we have been on the lookout for Bennett's fracture, with the result that I here report eight cases of this interesting lesion, nearly all of which have been observed in the surgical dispensary of the University of California. With the increase in our cases of Bennett's fracture there has been a marked decrease in our diagnoses of sprains of the thumb and of subluxations at the metacarpal-trapezial joint.

It is perhaps not surprising that this fracture, which I now believe to be the most common as well as the most important fracture of the metacarpals, should go so long unrecognized. Its diagnosis is sometimes very difficult. Those who are not familiar with the lesion will generally have their attention first directed to it by a radiogram. It is to Bennett's remarkable clinical acumen that we owe the recognition of this fracture long before the days of the Roentgen ray. By careful and pains-taking observation, together with an examination of bone specimens, he succeeded in eliciting the truth. Bennett's work is no less remarkable than that of Colles who published the first accurate description of the fracture which now bears his name in 1814. Like Colles, several years were to elapse before the true value of his observations were to be recognized. Beatson[3] published a single case of Bennett's fracture in 1900, and a month later Prichard[4] reported the fracture occurring in his own hand. Beatson's case was republished by Roberts[5] in this country in 1901. Oberst[6] has reported but two cases out of his great clinical material and more recently Aulhorn[7] has collected and published three cases, one occurring in Friedrich's clinic, one in Perthes' and the third in his own service. He states the fracture does not appear to be as frequent as Bennett had supposed. The only series of cases thus far reported is by Miles and Struthers,[8] and unfortunately but an abstract of their communication has been published.

The difficulties attending the recognition of this fracture have given the general impression that it is rare. Indeed, in my first communication on this subject, read before the California Academy of Medicine, a prominent surgeon, whose scholarly attainments are generally recognized, stated that he had never heard of Bennett's fracture. In any large out-patient service sprained thumbs pass as trifling affairs and receive but slight attention from the clinician, yet if the histories of these so-called sprains were to be followed, we would find that many give rise to prolonged periods of disability. The patient is not able to use his hand freely and his wage earning capacity is either nil or materially lessened. The long period of disuse and the rapid healing of the fracture after reduction has been made and a suitable dressing applied, are shown in several of our cases.

As a knowledge of the anatomy of the part is essential to a thorough understanding of this fracture, a brief consideration of this subject will not be out of place. The first metacarpal bone is shorter and wider than its fellows; the shaft is flatter and its distal end does not present so great a rotundity. The shaft narrows slightly as it approaches the carpal extremity or base, and then suddenly widens into a marked palmar projection, which carries a large part of the articulating surface. This surface is concavo-convex for articulation with the carpal bone, the metarcapal resting on the trapezium much as a rider rests in his saddle. But section through the joint has shown that the metacarpal articulation does not rest equally on the trapezium in all positions. In extension of the metacarpal it rests more on the dorsal portion of the trapezium while in flexion it rests more on the palmar portion. The saddle joint is more noticeable in the first than in the other metacarpal bones. The first metacarpal possesses two inherent points of weakness, the narrow portion just below the base, which we may term the neck, and the anterior basal projection which suddenly bulges from the shaft of the bone to increase the articulating surface. When, therefore, a sudden and a considerable force is received on the distal end of the first metacarpal, as in striking a blow with the clinched fist, or when a sudden force is received indirectly, as in a fall on the tip of the outstretched thumb, the first metacarpal is most generally fractured transversely at its neck, or longitudinally, the anterior basal projection being broken off. In some cases both these lesions are found. A continuation of the vulnerating force would drive the shaft of the bone on to the back of the trapezium.

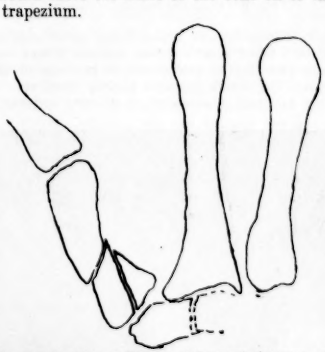

Fig. 1.—Tracing from radiogram of Bennett's fracture. Case 1.

A better idea of the mechanism of the injury can be gained from the following histories of our cases:

CASE 1.—J. B., a railroad engineer, aged 41, while adjusting the headlight on his engine, slipped and fell. He remained unconscious twenty-five minutes. He resumed work soon after the accident, but his left hand was very painful. Eight hours later, when he reached the city, his glove had to be cut off. The whole hand was much swollen. Careful palpation of the metacarpal and phalangeal bones revealed no fracture. The hand was treated as a simple contusion and hot applications made. One month later the patient again reported. The thumb was still very painful, especially when adduction was attempted. The patient had not been able to resume work since the receipt of the injury. There was considerable fluid in the flexor tendon sheath. Outside of the thenar eminence there was little swelling. The maximum tenderness was at the base of the first metacarpal bone. A tracing of the fracture is here given (Fig. 1), the radiogram being too faint to permit of reproduction. This shows a transverse fracture at the metacarpal neck, and a longitudinal fracture running into the joint between the metacarpal bone and the trapezium, the anterior projection at the base of the bone having been broken off. A subluxation is also present, although this was not demonstrated in the patient on account of the swelling. The thumb was put up in strong abduction, being held in this position by an internal rectangular cardboard splint. One month later the joint was somewhat stiff, but the patient had been able to resume work.

2. Russ: "Fractures of the Metacarpal Bones," Annals of Surgery, February, 1906, p. 288.
3. Beatson: British Med. Jour., May 5, 1900, p. 1076.
4. Prichard: British Med. Jour., June 23, 1900, p. 1533.
5. Roberts: Philadelphia Med. Jour., March, 1901, p. 481.
6. Oberst: "Ergänzungheft der Fortschritte auf dem Gebiete der Rontgenstrahlen."
7. Aulhorn: Deuts. Zeits. f. Chir., April, 1905, p. 227.
8. Miles and Struthers: Lancet, Dec. 12, 1903, p. 1655.

CASE 2.—T. D., aged 27, an oiler by occupation, took part in a street fight two days before he presented himself to me. He reported that he struck a heavy blow with his left fist tightly clinched, the force being received on the head of the first metacarpal. He went immediately to the City Receiving Hospital, where a diagnosis of backward dislocation of the first

Fig. 2. Bennett's fracture. Case 2.

metacarpal was made and a pasteboard splint applied. On examination I found great swelling over the thenar eminence. Posteriorly there was a prominence at the base of the first metacarpal. The thumb appeared slightly shortened. Profiting by my first case I succeeded in eliciting crepitus at the

Fig. 3.—Author's coaptation-traction splint.

metacarpal base. The accompanying radiogram of this case (Fig. 2), shows a displacement of the distal fragment upward. The line of cleavage is the same as that described by Bennett. Function was restored at the end of three weeks.

The following coaptation and traction splint was applied (Fig. 3), this being a modification of the splint which I had previously generally employed for fractures of the metacarpal bones. The thumb was put in strong abduction and three wooden skewers—butcher's—neatly padded, were placed about the metacarpal, one posteriorly in the interosseous space, one along the outer border, and the third over the thenar eminence. These extended from well above the metacarpal bone to the first phalangeal joint. They were fastened tightly in place by two strips of adhesive plaster. Traction was then exerted on the thumb and maintained by strips of adhesive plaster passing about the first phalanx and the projecting ends of the three skewers. This dressing was reinforced by a rectangular cardboard splint. Accurate coaptation and sufficient traction to overcome the deformity and muscular action are most necessary in the treatment of this fracture. Slate pencils or small lead pencils can be used in place of the wooden skewers. The soapstone slate pencils are less brittle than the ordinary kind.

CASE 3.—T. D., a waiter, aged 26, struck a man with his right fist tightly clinched, three weeks before presenting himself at the clinic. He stated that immediately after the blow was struck he noticed that the metacarpal bone was displaced backward and that a friend "pulled it into place for him." He had not been able to use the thumb since the receipt of the injury; considerable swelling was present. Crepitus was easily elicited at the metacarpal base, but there was no tendency toward a repetition of the displacement. The coaptation-traction splint was applied and the fracture made an uneventful recovery. Full function was restored at the end of seventeen days.

Fig. 4.—Bennett's fracture. Case 4.

CASE 4.—J. W. C., a laborer, aged 27, while attempting to move a heavy box three weeks before presenting himself at the clinic, struck the tip of the right thumb very forcibly against the edge of the box. He at first regarded the injury as trifling, but found that he was unable to use his right hand in manual labor. He had had no treatment. On examination there appeared to be a subluxation at the trapezial-metacarpal joint, accompanied by considerable shortening. There was little swelling in the vicinity of the bone. Crepitus was determined near the base. The radiogram (Fig. 4) shows the presence of a transverse fracture at the narrow portion of the bone, with an overriding of the distal fragment. With the thumb in traction and strongly abducted, a tightly fitting plaster-of-Paris dressing was applied. Twelve days later the dressing was removed. There was slight exuberant callus, but the alignment was perfect. There was good function and the bone seemed to be firmly united. As a matter of precaution, however, the dressing was reapplied for five days longer, and the patient resumed his work the following day.

CASE 5.—G. B., a laborer, aged 35, was hit with a heavy lead pipe across the palmar surface of the metacarpal bones of the left hand, the force being largely expended on the first metacarpal. There was great pain and swelling of the whole hand when we saw him shortly after the injury had been inflicted. He had motion in the fingers, but was unable to move

the thumb. Crepitus was determined near the base of the first metacarpal. The upper end of the distal fragment appeared prominent, although this is not shown in the radiogram. The radiogram (Fig. 5), shows, however, a transverse fracture just below the palmar projection at the base of the bone. A coaptation-traction splint was applied. This was removed at the end of twelve days. There was a slight callus deformity at the point of fracture, but a good functional result.

CASE 6.—P. F., laborer, aged 33, had injured his left hand six days before I saw him. He stated that he tripped and fell with thumb extended, the force of the fall being received on the tip of the thumb. Since then he had not been able to use his left hand. There was no laceration, but slight discoloration and much swelling were present about the first metacarpal, especially noticeable in the flexor tendon sheath on the thenar eminence. There was some shortening of the thumb and the clinical picture of a subluxation. Pain was localized at a point just below the metacarpal base and crepitus was easily determined here. The thumb was placed in a coaptation-traction

Fig. 5.—Bennett's fracture. Case 5.

splint and the dressing removed at the end of seven days. The alignment was good and no crepitus was determined. The splint was reapplied and removed on the fourteenth day. There was perfect functional result and no deformity.

CASE 7.—T. D., a kitchen helper, aged 56, had injured the thumb of left hand four months before he applied at the clinic. He stated that he had fallen, striking the palmar surface of the ungual phalanx of the thumb very forcibly. On examination there was considerable prominence at base of the first metacarpal, giving the appearance of a backward subluxation. On comparison of the two thumbs slight shortening on the injured side was observed. Crepitation was elicited just below the base of the metacarpal. The patient was able to execute slight movements in all directions, but free movement gave him pain. There was slight swelling over the thenar eminence. A coaptation-traction splint was applied and a radiogram then taken. This showed a transverse fracture similar to that in Case 4. The alignment was good. The patient was discharged three weeks later with full restoration of function.

CASE 8.—H. K., a solicitor, aged 45, had fallen three days before, striking his right thumb forcibly against a wall. There was some swelling and great deformity, the lesion appearing like a complete dislocation backward of the first metacarpal. The trapezium could not, however, be felt in the palm of the hand, as is usually the case in these luxations.

With considerable traction on the abducted thumb reduction was made and crepitus was elicited. The point of fracture was found to be just below the joint. The overriding of the distal fragment had been great and there was a strong tendency for a repetition of the deformity. A coaptation-traction splint was applied, but when examined three days later it was found that the deformity had recurred. The deformity was corrected and a plaster-of-Paris bandage applied very tightly, pressure being exerted at the point of fracture until the plaster had set. The dressing was taken off at the end of twelve days. The patient had free movement of the thumb. He returned to the clinic one month later, complaining of a general tenderness over the first metacarpal. There was slight deformity, but motion was not limited. Massage was advised and the patient has not reported since that time.

It will thus be seen that the left first metacarpal was fractured in five cases, the right in three. In all cases the fracture resulted from a considerable force; from direct violence in two cases, striking a heavy blow with the clinched fist. In four the fracture resulted from indirect violence, striking the thumb forcibly, the tip of the thumb being specified in two cases. The exact manner in which the accident took place could not be elicited in the first case. In the fifth case the fracture resulted from an injury inflicted on the palmar surface by a heavy lead pipe. While in point of etiology this injury does not correspond with the others, nevertheless the displacement was characteristic of Bennett's fracture and it has therefore been included in the series.

All the cases have occurred in men ranging in age from 26 to 56 years. Cases 1 and 5 alone reported for treatment immediately after the injury and it is noticeable in these instances that considerable trauma of the hand accompanied the fracture. The other patients at first considered the injury too trifling to warrant surgical attention, but, after periods of disability ranging from two days to four months, consulted us.

The diagnosis between this fracture and backward subluxation is a matter of the greatest importance, for it will be remembered that surgeons have for years failed to determine the true lesion. Bennett has made the statement that "when we bear in mind the form of the articulation, it is difficult to conceive the idea of a partial dislocation occurring in it and remaining as a permanent deformity. If we apply the analogy of a rider and his saddle to this perfect saddle-shaped joint, the difficulty will, I think, be evident. A rider, thrown on to the pommel, must, as we know, adopt one of two courses; make his dislocation complete, or get back into his seat. There is no permanent partial displacement possible."

Partial displacement does occur, however, and the following case, seen by me in consultation with Dr. John C. Newton, is given in proof of this statement.

CASE 9.—H. F. C., a stevedore, aged 32, engaged in a street fight on Jan. 2, 1906. He reported that he struck his adversary a heavy blow with his clinched fist. When seen by Dr. Newton the next day the vicinity of the first metacarpal of the left hand was much swollen and discolored. There was a hard swelling near the metacarpal-trapezial joint and distinct crepitation could be heard. A moulded plaster-of-Paris splint was applied, but the deformity showed a great tendency to recur.

I saw patient on Jan. 14. At that time the swelling had largely disappeared but the least movement was very painful. The proximal end of the first metacarpal was prominent, giv-

ing the picture of a backward subluxation. Reduction was easily made and was accompanied by a decided crepitation, but the deformity recurred immediately when the pressure was relieved. With the metacarpal reduced and the index finger on the metacarpal-trapezial articulation, I carefully palpated the shaft of the bone with the second and ring fingers, at the same time manipulating the distal end of the metacarpal with the other hand. No fracture of the bone could be made out and the crepitus which was elicited when reduction was made, was distinctly wanting. It was evident that we were dealing with a backward subluxation of the first metacarpal, and a radiogram taken the following day showed that the bone was intact. The metacarpal was placed in abduction and a plaster-of-Paris roller bandage applied. Dr. Newton tells me that the patient resumed work on March 2. He examined the hand four days later; the patient had free movement of the thumb, but the base of the metacarpal was still prominent.

This case exhibits the main points which are to be borne in mind in the differential diagnosis. In obscure cases the Roentgen ray must be depended on to make a diagnosis, but the clinician will generally be able to arrive at a correct conclusion after a careful examination. We have found the dressing here described useful, although it failed in case 8. After reduction has been made and maintained the fracture heals very readily, even in old cases. Our shortest period of disability was twelve days, our longest one month.[9]

THE FORMATION OF CONNECTIVE TISSUE IN THE ANTERIOR PART OF THE VITREOUS BODY IN YOUNG GIRLS.

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NEWARK, N. J.

Hirschberg[1] says: "Enigmatical to me is also the white tissue formation in the lower anterior part of the vitreous body, which I have seen a few times in young girls, ending in some in some damage to, in others in total loss of vision. In these cases tuberculosis could be excluded. He quotes briefly two cases.

CASE 1.—A healthy girl, aged 16, was first seen Nov. 29, 1897. The right eye began to lacrimate two and one-half months previously. The lacrimation lasted two days and was accompanied by pain for a day only. There was obscuration of right eye; the left eye was normal. Right eye: fingers at 4′ V. F. intact. There was a large dark spot which surrounded the blind spot, and which sent a broad offshoot toward the point of fixation. There was no irritation. Tn. Brownish dots in the cornea. The pupil was of medium size but irregular in form. There were brownish dots on anterior capsule, bluish spiderweb-like opacity immediately behind lens which is transparent. Flaky opacities were in the vitreous. An extensive white opacity, greenish-white in daylight, was situated outward and downward close behind the lens. The fundus was not visible.

Treatment.—Moderate inunction treatment was followed by slow but steady improvement. Jan. 11, 1898, counts fingers at 6′; February 28, fingers at 8′; March 22, fingers at 10′; June 9, 1898, S. 1/25; August 25, S. 1/10. V. F. good, but with a large longitudinal scotoma, which includes Mariotte's spot. Posterior synechia. The bluish-white mass behind the lens is still present but smaller. Disc visible, with a staphyloma-like focus adjoining lower margin, and a thick floating opacity in vitreous immediately in front of disc. uly 9, 1900, no change. Robust health.

CASE 2.—A girl, aged 26. Was first seen Oct. 1, 1890.

History.—In January of same year she noticed suddenly a grayish-white veil before right eye. This lasted but two days, but returned intensified in March. Vision improved again, but for some weeks past it had failed again. She was anemic and weak, but free from organic disease. Left eye normal (M. 3, 5. D.). Right eye, fingers at 5′. V. F. defective upward, defect wedge-shaped, extends up to point of fixation. Bluish flocculent opacities were in vitreous. Outward and below was a bluish connective tissue formation connected with a peripheric detachment of the retina.

Treatment.—Tannin and secale, iron and hydrastis were used in treatment. Nov. 19, 1890, an iritis had developed; the fresh exudation extended close up to the lens. April 15, 1891, the eyeball was deformed and there was a grayish-white reflex from behind pupil. With oblique illumination a grayish-white wall was seen behind lower half of lens. On Nov. 28, 1891, the V. F. was contracted to an island below the point of fixation.

Cases like the ones here reported, in which only one eye is the seat of disease, are not very rare and have doubtless been seen by most ophthalmologists. In Case 3 both eyes were affected in almost the same manner simultaneously and although the patient was practically blind for some time, and the improvement very slow, the outcome was complete restoration of vision in both eyes. The case seems to me to be worthy of recording also, as I have had the opportunity of seeing the patient during the subsequent twenty-five years, and therefore can testify to the permanency of the cure.

CASE 3.—Miss S. R., aged 20, was first seen by me May 2, 1875.

History.—She was in very good health. Her family history was good. Parents were in good health. Had never had a serious disease. Had noticed some impairment of vision for last three years. For six days past she was almost totally blind in left eye. Both eyes were perfectly normal in appearance, and the mobility of either was unimpaired in all directions.

Examination.—Both eyes are E. R. S. 18/50. L. S. 2/200. Ophthalmoscopic examination showed in right eye vitreous body very cloudy with floating membranous opacities. Disc and retina were veiled. Retinal veins were very large. Tn. V. F. intact. Left eye vitreous was so opaque that disc and retina could not be seen. Dense floating opacities in anterior part of vitreous. Tn. V. F. intact.

Further inquiry revealed that she menstruated regularly and no evidence of disease of other organs could be discovered. Urine was free from albumin and sugar. I ordered two leeches to each temple and prescribed potassium iodid in 5-grain doses three times daily.

Clinical Course.—May 15. No change, except that in right eye there are now visible several small bluish-white globular masses in lowest part of vitreous. In the left eye there is now apparently a slight contraction of the V. F. downward.

May 22: Right eye; bluish-white plaques are now also seen in lower part of vitreous of this eye. In both eyes there are now semi-transparent membranes in anterior portion of lower part of vitreous, resembling detached retina, but they are distinctly circumscribed. There is apparently an increase in the opacity of the vitreous in both eyes. R. S. 18/40. L. S. 6/50.

June 6: Right eye as before. Left eye, vitreous is much clearer. The disc is now visible and seems normal. Retinal veins are much enlarged. There is no apparent change in the choroid.

Aug. 8: Both eyes are in about the condition last described. Jan. 25, 1876. In both eyes the vitreous is much clearer, otherwise as before. R. S. 18/25. L. S. 18/25.

July 6: For the last three months, vitreous has been almost clear in both eyes. Now there are again visible in the left eye, several of the bluish-white globular masses in the lower part of the vitreous. In the right eye, the semi-transparent membrane in lower part of vitreous is now of a distinctly convex outline, and protrudes toward the axis of the eye, from in front and below. Arterial vessels pass over it and diminish in caliber as they approach most convex portion of prominence, while veins gain in size as they approach the periphery. No connection between these vessels and the retinal vessels can be

9. Further literature may be found as follows: Bähr: Monats. f. Unfallhk., 1897, No. 4; Blenke: Ibid., 1901, No. 4; Lauf: Deuts. militärärztliche Zeits., 1902, No. 4.

1. Hirschberg: "Einführung in die Augenheilkunde," second half, division 1, p. 211.

made out. Opacity of vitreous is again somewhat increased in both eyes. R. S. 18/25. L. S. 18/25.

Nov. 4: Right eye. The membrane in lower part of vitreous is no longer visible and the vessels that were seen on it are now indistinctly seen at a greater distance from the anterior part of vitreous than formerly. In the place of the membrane there are now many small fixed membranous opacities. In lowest part of vitreous apparently immediately behind lens are seen two small bluish-white glistening bodies of globular form and in outer region closely behind or on posterior capsule of lens are several very dark opacities. A diffuse opacity of vitreous still veils the disc in both eyes. R. S. 18/25. L. S. 18/25.

Feb. 21, 1877: Right eye: the interior portion of the vitreous is again full of floating membranous opacities. The semi-globular protrusion previously noticed, is again visible. The veins on it have changed their course somewhat. They now run downward instead of forward. The left eye is now free from floating opacities. R. S. 18/20. L. S. 18/15. Patient is still taking potassium iodid in 10 grain doses, three times daily.

March 16: Right eye: The floating membranous opacities have largely disappeared. The convex protrusion is now distinctly seen as a grayish membrane, over which vessels pass from behind forward.

Left Eye: A grayish membrane, convex in form, has made its appearance also in this eye. It is situated in lower outer portion of vitreous, apparently not far behind lens, and protrudes toward the axis of the eye. Vessels are seen on it, but no connection between them and the retinal vessels can be made out. It looks very much like a detached retina. The membrane is sufficiently translucent to allow floating opacities to be seen behind it. In both eyes the V. F. is intact. R. S. 18/20. L. S. 18/15.

June 22: In both eyes the convex protrusion has apparently become larger, and its outline is more opaque.

Dec. 14: Right eye: There is an increase in floating membranous opacities in anterior portion of the vitreous. The convex protrusion is hidden by them.

Left Eye: The convex protrusion seems larger than at last visit.

Jan. 26, 1878: Right eye: Vitreous opacities have nearly all disappeared. The protrusion previously noted, is no longer seen. S. 18/20.

Left Eye: The convex membrane seems to have become loose anteriorly, as it now floats slightly on movements of eye. Several bluish-white, brilliant globular bodies are again visible in lower part of vitreous, not far behind lens.

December 1: Right eye: There is still diffuse haziness of vitreous, but no floating opacities are present. The apparent detachment of the retina is no longer visible. S. 18/20.

Left Eye: The same as right; the membranous protrusion is not visible. There are no vessels in vitreous. S. 18/20.

June 7, 1879: Right eye: No change since last entry.

Left Eye: An increase in the number of floating opacities. The semi-globular protrusion in lower outer part of vitreous is again visible and in addition there is now seen a similar protrusion with vessels on it, in lower inner portion, not far behind lens. S. 18/20. V. F. intact.

April 14, 1880: Right eye: Media are perfectly clear; fundus is normal. S. 18/15.

Left Eye: Large floating membranous opacities. The semi-globular protrusion in anterior lower portion of retina remains as before. S. 18/20.

Nov. 22, 1881: Right eye: Diffuse haziness of vitreous, otherwise normal. S. 18/20.

Left Eye: Haziness of vitreous. The protrusions in lower part of vitreous are no longer visible.

Feb. 2, 1882: Right eye: Vitreous not quite clear. S. 18/15.

Left Eye: Membranous floating opacities in vitreous. Two small atrophic patches are now visible in outer periphery of choroid. S. 18/30.

During the following five years she lived in the tropics. She married and had one child. On her return to this country I examined her eyes and found both free from opacities in the vitreous and fundi normal. During the last few years, the lens of this left eye has become cataractous, and more lately the lens of the right eye has become somewhat opaque at posterior pole. On Dec. 14, 1905, I found her vision as follows: R. Hm. 1.50; S. 6/6; L. Hm. 1.5; D. S. 6/12. With the exception of the opacities of the lenses the eyes are apparently normal.

As to the pathology of this affection I have nothing new to offer. Although I did not see any actual extravasation of blood in the vitreous body in this case, I have seen it in others with similar membranous formation in the anterior parts of the vitreous, and think that in this case also, hemorrhages from the ciliary body were present before I first saw the case. The resemblance of the membranes with the vessels on them to a detached retina, was so great that one of my most experienced colleagues, who saw the case, urged me to make a scleral puncture, but having watched the development of these membranes for months, I felt sure that they were not the retina and, therefore, did not follow his advice. The gradual disappearance of the connective tissue formation was followed by the complete absorption of all the floating opacities in the vitreous. The participation of the choroid in the morbid process was shown by the appearance of an atrophic spot near its periphery.

SPINAL AMYOTROPHY WITH PUPILLARY INEQUALITY, AND JUVENILE DYSTROPHY.*

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CHICAGO.

The following case, seen in consultation with Dr. Alexander C. Wiener, is reported not as such an extraordinary case, for it is one of amyotrophic lateral sclerosis, but on account of the association with it of inequality of the pupils. This association is exceptional.

CASE 1.—Mrs. J. P., aged 49, twice married, has two healthy children by her first husband. During the nine years of married life with her second husband she has borne no children, but has had four or five early abortions.

Family History.—Her father died of consumption when the patient was six years old. Her mother died of paralysis of the heart at the age of 56. She has a half brother and a sister in perfect health. Nothing further of interest is in the family history. She had the usual children's diseases, and a severe attack of inflammation of the bowels twelve years ago. Menstrual life began at 13 years of age, is regular and painless. Ten years ago the patient worked hard, so hard that men refused to do the work, kneading bread all day in a bakery. This she continued for about five years. She would use a barrel and a half of flour a day. As a strong, healthful, farmer's daughter, she had worked hard pitching hay in her early life.

History of Disease.—Her present trouble commenced about three years ago. The middle finger of the right hand began to be stiff, especially when she was sewing. It seemed like "a steel spring at times, and flew back." There was absolutely no pain, soreness or other sensory manifestation with it. Then the wrist became weak and dropped on the right side. Still there was no pain or soreness whatever, no numbness or tingling either. About four months later the same phenomena took place, in about the same way, in the left hand. When she would pull out the middle finger it flew back like a steel spring. Then the wrist became weak and dropped on the left side as it had done on the right. No sensory phenomena of any sort, however, appeared at this time anywhere. This condition remained more or less stationary until last Christmas, when the trouble seemed to pass to the arms and shoulder.

* The patients were shown to the Chicago Neurological Society, March 29, 1906.

At present she can raise her left arm to the head, but not the right arm. There is wasting to a considerable degree in the deltoids, and to a lesser degree in the other shoulder and neck muscles. All of this is more pronounced on the right than on the left side. There is a distinct reaction of degeneration on electrical examination of the right deltoid, and partial reaction in the supraspinati and infraspinati, interosseal, and thenar muscles of the right side; and a very slight reaction in the corresponding parts of the left side. There seems to be no wasting of the latissimus dorsi and rhomboids and very slight, if any, in the pectorals. The left arm is somewhat softer and smaller than the right. The thumb muscles are slightly wasted. The hands seem to her swollen and somewhat larger generally than normal. They are feebly rigid and tend to assume the *main en griffe* attitude. The muscles of the neck, "the cords" she calls them, feel a little stiff and "seem to crack." She does not think she is any thinner about the neck. There have been creeping, fibrillary twitchings in the muscles of the right arm at times, but not in those of the left. The collar bone feels sore and slightly depressed.

There are no symptoms whatever in the legs; but the knee jerks are very decidedly exaggerated. No ankle clonus or Babinski could be elicited.

Until last Christmas there were no notable sensory symptoms in any part of the body or extremities; no local tenderness anywhere now or referred to in the past. Under the left shoulder there is now a little soreness, and under the right collar bone she feels a slight degree of soreness. There is absolutely no spinal tenderness on vigorous percussion; no tenderness along the course of any of the spinal nerves. There have been no neuralgic manifestations. There have been no bowel or bladder troubles of any sort.

The right pupil is markedly dilated, but contracts slightly, quickly and sharply on accommodation and light stimulation. This condition is probably due to ciliospinal irritation and not to a sympathetic lesion.

Differential Diagnosis.—There are some suggestions of syringomyelia in this case; but the latter disease is ruled out by the absence of the syringomyelic syndrome, for the pain and heat sense, as well as the tactile sense, are normal everywhere. Peripheral neuritis is excluded by the absence of all sensory symptoms; and for the same reason pachymeningitis cervicalis hypertrophica is also ruled out. The latter disease, were there present any sensory symptoms at all, might be well considered, in view of the fact that the patient has had two healthy children with her first husband, but a number of suspicious abortions with her second. The closest inquiry in regard to any specific trouble elicited continued denial.

Treatment.—The treatment consists of the daily injection hypodermatically of nitrate of strichnia gm. 0.003. After four weeks of this treatment, without any improvement in the paralysis, there seems to have been a little improvement in the appearance of the atrophied muscles around the right shoulder. The patient and her husband are very positive of this, though imagination may have something to do with it, I suspect.

The case of juvenile myopathy may be diagnosed as such clinically, though there is some question as to its being a pure example of Erb's type. The case is from the Cook County Hospital, where I was asked to see it in consultation, in the service of Dr. H. V. Halbert.

CASE 2.—G. H., aged 19, German, unmarried, watchman and laborer. Patient has indulged in beer, whisky and tobacco, but not to excess. Had measles in childhood and says that when young he was "deathly sick" several times, but from what cause or disease he does not know. He has never had typhoid fever or diarrhea prior to Christmas, 1905, when the present trouble seems to have begun. He had an attack of gonorrhea, July, 1905; syphilis is denied.

History of Disease.—On Dec. 28, 1905, the patient entered the Cook County Hospital, in the service of Dr. W. S. Harpole, and gave the following history: About two weeks previously he commenced to have diarrheal attacks, obliging him to go to stool three or four times a day and the same number of times at night. He formed no opinion of his own as to the cause of this trouble. The stools increased to five or six a day and the same number at night. At one time they decreased in frequency and severity, but increased again, for which reason he entered the hospital. The stools, according to the patient's own account, were thin and watery, yellowish, sometimes odorless and at other times "putrid." Prior to coming to the hospital this condition existed for one week, during which time he ate no solid food whatever. He never saw any blood in the discharges. Vomiting began with the onset of diarrhea, and during the week prior to entering the hospital, occurred every day. Whenever he took a bite of food he became nauseated and immediately began to vomit. During the last two or three days of the week he vomited two or three times during the day and as often during the night. He thirsted keenly for cold water, but the drinking of it would set up an attack of emesis.

Fig. 1.—Juvenile myopathy.

He had no appetite for food and he believed he had lost ten pounds at least in two weeks. A slight cough was present. There was tenderness in the region of the stomach, and occasionally for a few minutes he would experience a dull pain in the stomach itself. He never had had night sweats; never had had any difficulty in urination.

Examination.—The record of the physical examination of the patient, made Dec. 28, 1905, shows no abnormality about the head. There were prominences of the intercostal, supraclavicular and infraclavicular spaces; winged scapulæ; narrow and emaciated thorax; no pulmonary, cardiac or pericardiac signs; no disturbance of the pulse, except a slight retardation and reduced tension; no abdominal tenderness, but a somewhat

scaphoid abdomen. Liver and spleen were impalpable; there were no evidences of fluid or tumor in the abdomen. Nothing of note was discovered in connection with the genitalia, the nervous and glandular systems, the extremities or the skin. Urinalysis revealed; color yellow, cloudy, acid reaction, sp. gr. 1,020, trace of albumin, no casts, no sugar, abundant deposit of urates. Examination of feces was negative.

Examination of the blood showed white corpuscles, 8,200; reds, 4,500,000 or 90 per cent.; hemoglobin, 90 per cent.; color index, 90/90-1. Differential—polymorphonuclears, 67 per cent.; large mononuclears, 20 per cent.; small mononuclears, 11 per cent.; basophiles, 2 per cent.; eosinophiles, 0; enucleated reds, 0; transitional forms, a few. The blood stained well and

Fig. 2.—Juvenile myopathy.

coagulated rapidly. There was slight crenation and poikilocytosis of red blood corpuscles. Widal reaction, solution, 1-40, was not positive in 35 minutes. The temperature remained at all times practically normal, while the pulse ran a little subnormal. An antityphoid régime was adopted, and the patient left the hospital Jan. 6, 1906, recovered.

On March 13, 1906, the patient returned to the hospital. He says that almost immediately after he had gone out as cured he began to notice some pain and stiffness in his legs. The pain increased on walking. The muscles seemed to swell up and then grow small. Similar phenomena appeared in the thighs. After an interval of about ten days the same thing, or something like it, occurred in the shoulder and advanced down the arm to the elbow. In the upper limbs these manifestations did not seem so marked to him as in the lower limbs. Finally, the neck muscles became gradually involved, so that he had difficulty in holding up his head. He could walk when he entered the hospital, but he complained of pains of a dull aching character in the right leg when he exerted it. According to the patient's own testimony, the left leg has made an almost complete recovery. He feels that he has lost 20 pounds or more in weight the last three months. The marked atrophy of the shoulder and pelvic girdle muscles is obvious. In the upper extremities, the deltoid, and infraspinati and supraspinati, the pectorals, and the muscles of the arm down to the elbow are decidedly wasted. The forearm is very little wasted, if any, and the hand is practically normal. The glutei muscles, the muscles extending the hip joint, and those of the thigh are wasted. The legs below the knee and the feet are practically normal. The appearance of the face is characteristic. The knee jerks are present but much reduced. There have never been any fibrillary contractions at any time.

On electrical examination the wasted muscles show a quantitative reduction in excitability to both Faradic and Galvanic currents. No reaction of degeneration or inversion of normal formulæ have I ever been able to detect. There are no sensory disturbances, nor any recorded except for the slight dull pains in the beginning. There are no disturbances of the sphincters.

A few words of interest may be said in regard to the etiology of the myopathies, and especially of this case. As we all know, heredity plays a dominant rôle, but cases have been reported by Erb himself, Gowers and others, in which no heredity could be traced, hardly even a neuropathic tendency. In our case certainly no heredity could be elicited. Other cases are on record in which infection, such as diphtheria, rheumatism, measles, scarlatina, played a very possible and even probable rôle. Gowers says, "As a rule no exciting cause can be traced. In a few instances the onset has succeeded some other morbid process, such as chlorosis, acute disease, rheumatic affections due to exposure to cold, and the depression of general health resulting from these may have determined the time of onset." In a case reported by Gowers the patient died from diarrhea. In connection with the history of infection that appears in this case it is to be noted that the winged scapulæ and marked depression about the shoulder girdle were made note of when the patient entered the hospital in December on account of diarrhea. The diarrhea may have been a mere incident, and the muscular wasting, unnoted, may have already begun.

In the next place a polymyositis of mild degree has been reported as occurring before these myopathies, and is suggested, in our case, in the soreness, transient swelling of the muscles of the leg, and other characteristics of the disease. The view has been put forth that some of these myopathies, if not all of them, are due to a transient mild degree of polymyositis. Jacoby[1] of New York reports an interesting case with many features like those of our own, and discusses most interestingly and plausibly the possible relationship between his case and cases like his and primary progressive muscular atrophy. He asks:

In short, is our case, perhaps, a case of progressive muscular atrophy in which the inflammatory stage is more marked clinically than usual, due to the myositis being more of a parenchymatous character? . . . Are not some cases of primary progressive muscular atrophy the resultants of light cases of polymyositis parenchymatosis? We believe that there is considerable evidence in favor of these views and we do not stand entirely alone in possessing this opinion.

Wagner insisted, and Unverricht admitted the possibility of their cases being acute cases of primary progressive muscular atrophy. Wagner's cases showed a

1. Jour. of Nervous and Mental Disease, vol. xiii, No. 11.

duration respectively of three and eight weeks; Unverricht's a duration of six weeks. Gowers, Beevor and most authors believe that the pathologic change in the myopathies in the muscles is interstitial, that is, overgrowth of fat, proliferation of nucleated fibrous tissue between muscle fiber, with secondarily changes in the muscle fibers themselves, causing the narrowing and distortion of the fibers and their wasting.

A transient infectious polymyositis may, therefore, in our case, as has been suggested in many if not all cases of primary myopathy, have been present. The evidence, at all events, points away from a primary cord or nerve degeneration, and toward a primary muscular change.

But again, in these cases of myopathy there may be both a neural and a muscular process going on at the same time. In one case[2] the cord was normal except at the last dorsal segment, where there was found an area of granular disintegration in the intermediate substance on each side, but the cells of the anterior cornua were never atrophied, according to Beevor. Barsicow's cases and Zimmerlin's show that different, so-called types, of primary myopathy occur in the same family; and other cases have been reported wherein clinically neural disease was suspected and yet only myopathic changes were discovered and *vice versa*. Such cases lend color to the contention of Erb, who holds in contradistinction to Gowers and others, that the change in the muscle is primarily in the muscular substance itself, and secondarily in the interstitial tissue, and that the whole process is a functional disturbance in the trophic centers of the cord; thus, according to Erb, making of a myopathy both a muscle and a neural disease. These transitional cases, such as Barsicow's and Zimmerlin's, give support to the contention of many of our latter day physiologists that the lower motor neuron, with its associated muscle, constitutes a physiologic unit, a neuro-muscular apparatus. Grasset has even gone so far, in declaring for the solidarity of the lower neuron, as to affirm that an anterior poliomyelitis can not be differentiated from an inferior motor polyneuritis, because they are both but expressions of an inferior motor neuronitis.

The etiology and pathology of our case are such as not to exclude it entirely from the class of juvenile myopathies, though they do not give it the frank, clear-cut position demanded by the average text-book.

The symptomatology, especially in regard to the distribution of the atrophy involving as it does the shoulder and pelvic girdles, favors the diagnosis of juvenile dystrophy for our case.

cord; thus, according to Erb, making of a myopathy

In differentiating in doubtful cases between a dystrophy insists on the great importance of the grouping of the atrophied muscles. Thus, in spinal cases, he finds that the deltoid, infraspinati and supraspinati, clavicular part of the pectoral, biceps, brachialis anticus and supinator longus are in one group involved (fifth cervical root); the latissimus dorsi, sternal part of the pectoralis and triceps being involved in another group (sixth cervical root). In the myopathies, the biceps, triceps and supinator longus are wasted, while the deltoids and spinati muscles escape. In other words, he finds in the spinal atrophies that there is a physiologic grouping of the muscles according to the center of the cord involved; while in the myopathies there is no evidence of such spinal grouping. This, I think, is a little too rigid. Gowers has stated, in his description of the myopathies, that occasionally hardly any muscle of the body escapes. He reports the case of a man, 27 years of age at the time of his death, with no history of any analogous case in the patient's family. The affection began at the age of 14, when the feet began to turn in so that he walked on the outer side of the foot. He soon noticed a gradual wasting of the legs, which slowly progressed, and at about the age of 24 involved the arms. When the patient was first seen, a few months before his death, the muscular atrophy was universal and the subcutaneous fat had completely disappeared. Even the hands were greatly wasted. There was a hollowing in the position of the thenar eminence, just as one sees in progressive muscular atrophy of the spinal type, and wasting in the interosseal muscles. There had been slight fibrillation in this case. The intercostal muscles were paralyzed. The wasting of the legs was extreme and the patient ultimately died with diarrhea. The muscles were found to be small and pale, the chief microscopic change being intense granular fatty degeneration of the fibers. A very few normal fibers were seen in some muscles. There was no increase of interstitial tissue. Careful microscopic examination revealed no morbid changes whatever in the spinal cord.

I am convinced that the mere distribution of the atrophy is not a sufficient basis whereon to distinguish special types of this disease. If, as it is believed, the primary trouble is some neural effect, the distribution of the atrophy would have to follow along physiologic lines represented in central functions. It is difficult to understand why certain areas for the atrophy should be selected as the prominent manifestation of a disease which is so generalized as an hereditary or infectious etiology would presuppose. On the other hand, if these primary myopathies are nothing but the late results of a transient polymyositis, as has been contended by some, it is also difficult to understand why there should be so much uniformity in the distribution of the atrophy in the so-called types. As a matter of fact, the types, as such, are exceedingly rare. The mixed or obscure cases are much more frequent and give strength to the view that these types, as such, do not really exist, but are the mere accidental clinical illustrations of a much larger pathologic process than they would presuppose or represent. In the myopathies there is partial preservation of the deep reflexes. In our case the reflexes were neither increased nor absolutely lost.

In the differentiation between spinal atrophy and primary dystrophy much has been made of the presence and absence, respectively, of muscular fibrillation. In our case, fibrillation seems to have been totally wanting, and it is usually regarded that absence of fibrillation is a cardinal sign of primary dystrophy. Gowers says that fibrillation is absent and that this is almost the invariable rule; and yet in his own case, referred to above, he mentions that there was slight fibrillation. Another point of value in the differentiation between progressive muscular atrophy of the spinal type and primary dystrophy is the absence in the latter of the reaction of degeneration or qualitative change in the electrical excitability. As in our case, only a quantitative loss of excitability to both faradic and galvanic currents was observed. On this point Gowers says very emphatically that in a primary dystrophy there is no trace of the reaction of degeneration.

In both progressive muscular atrophy of the spinal type and in the primary dystrophies, the sensibility remains practically normal. There may be in both slight transient pains of a dull character, possibly due in the former to irritation of the sensory elements, and in the

2. Clarke and Gowers, Med. Chir. Trans., vol. lvii, p. 247.

latter to the initial transient polymyositis, if, indeed, the dystrophies are at all myositic in origin.

As a result of my own observations, I feel like seconding Gowers when he remarks that "it seems, therefore, undesirable to form a separate variety of juvenile muscular atrophy, as Erb has proposed. Spinal atrophies may also be juvenile." So also may myositic atrophies.

100 State Street.

PRETUBERCULAR CONDITIONS AND THE TREATMENT OF ASSOCIATED ANEMIA BY HYPODERMIC INJECTIONS OF IRON AND ARSENIC.*

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DETROIT.

It is a well-recognized fact that pulmonary tuberculosis is the cause of more deaths than any other one disease, except pneumonia. In the state of Michigan our mortality record for some years has averaged above 2,500, while in Detroit our last report shows that 327 individuals died from this cause. We are all familiar with the fact that nearly one-seventh of all persons die of tuberculosis, and more than 50 per cent. of the remainder give postmortem evidences of tuberculous foci that had remained dormant or succumbed entirely to the antitoxic properties of our cells.

If this latter astounding and well-conceded fact is true, seven out of ten individuals that reach late adult life have been infected with tuberculosis.

The profession and the laity are awakened to the stupendous problem at hand. Many of us appreciate our inefficiency in battling with the ravages of this disease. We are especially apt to become therapeutic nihilists in the treatment of tuberculosis and to keep most prominently in mind the phenomena of hopeless advanced cases where all therapy has proved unsuccessful. It is with a hope of re-establishing an enthusiasm along the brighter and more encouraging fields of so-called pretubercular and early tuberculous conditions that I present this subject for your consideration.

Our daily routine work in the examination of the chest will divide our patients into five distinct degrees of disease.

First.—The acute miliary or the advanced chronic cases of pulmonary tuberculosis, generally incurable in any climate.

Second.—The moderately severe tuberculosis, a considerable number of whom will recover under proper treatment.

Third.—Early or incipient phthisis, 70 per cent. of whom it is estimated can be cured under favorable conditions.

Fourth.—Bronchopneumonitis and other non-tubercular lung diseases.

Fifth.—Cases with hereditary or acquired predisposition presenting prominent nutritional or constitutional changes, which we may classify for convenience as pretubercular conditions.

Every consumptive of the moderately or advanced type is putting up a fight for life, and we are helping him as best we can. The symptoms of hemoptysis or the chills and fever of the mixed infections are usually signals for a change of physicians or a consultation. It is at these times that the relatives and the physicians become thoroughly alarmed, and no financial or physical effort can be too great to satisfy the anxious minds at these crises.

A most conclusive demonstration of the ravages of the disease up to the time of hemoptysis or when the evidences of mixed infection become pronounced is offered us by the *x*-ray. Two facts are at once apparent. First, phthisis pulmonalis progresses to small cavity formation usually before ordinary skill in percussion and auscultation reveals it; second, *x*-ray examination at the period of hemoptysis or at the onset of fever frequently demonstrates extensive tubercular disease all out of proportion to the physical signs. A keen knowledge of the diagnosis and treatment of the so-called pretubercular stage, which antedates outward tubercular manifestations, is exceedingly important from all points of view.

Those who take careful histories of chest cases and carefully analyze a series of them will most certainly be impressed with the great number of persons who report a prevailing impoverishment or morbid state of the whole system for a considerable period before the apparent development of the local lesions. The general practitioner finds a deep problem in the relations of hereditary and acquired predisposition to pulmonary tuberculosis, and his therapeutic indications must be promptly met.

If I were to state that pretubercular phthisis pulmonalis was as distinctly a stage of phthisis as phthisis incipiens, with prominent fixed diagnostic signs and manifestations, I am confident many would assent. How many of us vigorously supply the therapeutic indications in this curable onsetting stage of tuberculosis? Are we justified in terming this condition tuberculosis from postmortem findings in individuals of this type? No, but the patients should have the benefit of our suspicions. It is impossible to overestimate the value to the patient or the state of timely applied hygiene and treatment in the pretubercular stages.

Some very interesting questions arise along this line of thought. First, where does the so-called pretubercular stage of phthisis end and incipient phthisis begin? Second, what methods of diagnosis have we that differentiate the stages and what treatment must be applied? Third, how much tuberculosis of the lungs may exist before ordinary skill in physical diagnosis can detect it? If we can successfully thresh out these problems and throw the brunt of our efforts on patients exhibiting the phenomena of the pretubercular or the incipient stages, the mortality from consumption would certainly be lowered. The maxim of Tyndale is certainly logical: "that localized tuberculosis does not endanger life of itself so long as the general nutrition begets a reasonable resisting power of the pulmonary tissues." And especially the pulmonary gland tissues, I might add. This is demonstrated to us daily in the postmortem findings in accidental deaths.

We may divide our tuberculous cases into two grand classes. First, the infections that have taken place in strong healthy individuals, who have no evidences of predisposition, acquired or hereditary, such as renowned athletes or prize cattle. Second, those cases which present a prodromal period of impaired general condition from all causes. It is this latter class that I wish to consider.

It is my belief that the pretubercular stage of phthisis, as we now classify it, is, in the vast majority of cases, nothing more than a latent unrecognized tuber-

* Read before the Wayne County (Mich.) Medical Society.

culosis, and the development of the bacillus tuberculosis in many is a problem in cell nutrition, the biochemic phenomena of which we do not understand. The examination of recruits for the armies and navies of the world, performed by men eminently fitted for this work, reveals the fact that many cases of latent or incipient tuberculosis are admitted. The French army shows a record of 7.2 per cent. who soon develop phthisis, while the percentage is higher in the Austrian, German and American armies.

In the light of our present knowledge, we are unable to draw sharp lines of distinction between the pretubercular and incipient stages. There is no tuberculosis without the tubercle bacilli. It is the province of this paper, then, to classify all phenomena that predispose or lead up to the actual demonstration of incipient phthisis. For convenience in arrangement I have adopted and modified the classification of Loomis:

1. Corpulence, viz., the relation of the body weight in pounds to height in feet.
2. Chest conditions. A—Conformation of the Chest. B—Chest measurements. C—Vital capacity.
3. Constitutional conditions. A—Lymphatism. B—Digestive disturbances. C—Chloro-anemia.
4. Character of pulse.

Allow me to exclude from consideration the factors of sex, age, race, previous or present disease of the lungs, septicemia or other thoroughly appreciated etiologic factors.

Corpulence is taken from the French, and it is used to express mathematically any departure from a standard of ratio between weight and height. According to the military tables, a man, at height five feet eight inches, should weigh 150 pounds, having an average corpulence of 26.47. The ratio shown by dividing the weight by the height is 26½ as a standard. We appreciate entirely the important significance in progressive loss of weight without a demonstrable cause as a very constant symptom of onsetting phthisis. This fact of a continued loss in body weight is usually recognized as of importance only when it is followed by a hacking dry cough some months later. Accurate scales and a measurement of height in this class of patients are much more necessary than is generally admitted. A record is certainly as valuable in determining the nutrition of tuberculosis as the weight chart is in infant feeding. A majority of my patients have given a history of steadily increasing loss of weight before the lesions were diagnosed. Loomis reports 50 per cent. in a series of forty cases. Many thousand military observations have established a normal standard of corpulence for men as 26, while the observations of Bonchard show that women should have a normal of 23. A corpulence of 21 is considered abnormally thin.

Associated with steadily increasing loss of tissue is the prominent symptom of general malaise. The daily routine is marked by a substitution of will power for natural automatic power. We may note increasing motor debility, the patient may complain of being "sawed off at the legs," or a weakness in the knees. Sensations become abnormally accentuated or dulled; sleep becomes broken or profound; digestion, changeable respiration, superficial and slightly hurried, as 22 or 24. Many cases show acceleration of the heart with relative falling off of arterial pressure. When these symptoms of disturbance are present, and after the exclusion of acute and chronic diseases, we thoroughly examine the chest and nothing definite can be determined; a true latent tubercular condition exists.

When this complex of symptoms arise, we should give additional attention to the predisposing group of conditions previously enumerated. We are well aware that a single tubercle requires two to four weeks in its process of evolution, and the foci must break down and infect often numerous areas before clinical symptoms appear. Let us consider, further, what danger signals of a possible onsetting tuberculosis are reliable aids to diagnosis.

Our insurance companies are particularly interested in all observations of dangerous chest conditions. We are well aware that there may be many deviations from the normal standard of chest conformation without in any special manner increasing the liability to phthisis. The postures of childhood or occupation may lead to faulty conformations without increasing the tendency to the invasion of the tubercle bacilli. Our suspicions are aroused when we have presented for examination the lean, hollow chest, with marked subclavicular depressions, with prominent spaces between the ribs, with projecting scapulæ, and decided diminution of the antero-posterior diameter.

Considerable and more valuable evidence may be obtained by scientific measurement of a chest. French military observers have placed much importance on what is called a determination of "the vigor of constitution." It is taken successfully in this manner: "Two ordinary measuring tapes are sewed together and the point of juncture rests in the center of the spine. In men the estimations are made at the nipple level, while in women the line of the ensiform cartilage is preferred. The double tape aids in measuring the difference in expansion of the right and left sides, as well as the total chest mobility. The right is usually at least a half-inch larger, although both lungs should show almost equal expansion." A circular measurement below 35 inches is abnormal. The average of measurements taken at the end of forced expiration and at the moment of forced inspiration is defined as the thoracic perimeter. The vigor of constitution is the relation between the perimeter and the height. The thoracic perimeter of a person, according to the French, should never be lower than one-half the height.

The question of vital capacity is important, but the deductions are more subject to error. Considered from its own standpoint alone, it is of litle value. Much depends on the previous education of the patient and the experience which the physician may have had in the use of the spirometer. When considered in relation to age, weight and particularly height, important data on respiratory capacity may be obtained. Standards have been made from a great number of cases, and we find that the relation between the height and the capacity should be one to three inches in men and one to two and six-tenths in women. A man of five feet eight inches should not fall under 204 cu. inches. The interrelation of corpulence, thoracic perimeter and vital capacity should be considered valuable aids to a determination of genuine predisposition to pulmonary tuberculosis.

We are well aware that pneumonia, pleuritis, infectious diseases, occupations, direct exposure, etc., are the great etiologic factors, but these are eliminated, as I have previously stated, because they are centers of infection from local causes that can be demonstrated. They do not constitute the true pretubercular conditions. The pretubercular stage in some individuals is marked by a constitutional condition called lymphatism. Pathologic adenoids, tonsils, or hypertrophies interfere

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with nasal and nasopharyngeal drainage, the cervical lymphatic chains are taking in septic material and the bronchial glands are involved in like pathologic processes. A latent tuberculosis which it is impossible to diagnose may exist at this time or this type of glandular hypertrophy may take on infection and become a glandular tuberculosis of the lungs.

Another class of individuals may show a series of digestive disturbances prior to tubercular infections. There is a genuine relation between so-called indigestion that exists for months or years antecedent to phthisis. The malnutrition attending disorders or digestion renders the system much more vulnerable to invasion by the bacilli. Over-indulgence in indigestible food has increased this symptom.

It is especially the relation of chloroanemias to the development of phthisis that I wished to discuss and present for your consideration. Some investigators have claimed that an actual antagonism exists between tuberculosis and chlorosis. Some consider chlorotics well under way in the destructive processes of phthisis. However this may be, we can certainly be impressed with the constant attendance of anemic blood changes in cases that show imperfect chest development and continuous loss of weight for which no cause is apparent. It is especially a danger signal in men of tubercular age. Chlorosis ordinarily is not accompanied by loss of weight nor abnormal chest conditions. While the examination of the blood in the late stages of consumption is of no practical value, except that the absence of eosinophiles may be looked on as an unfavorable prognostic sign, examinations in the pretubercular conditions all show that the hemoglobin is diminished out of all proportion to the loss in red cells.. Henocque, an extensive observer, says that a diminished supply of oxyhemoglobin characterizes tubercular chloroanemia. The hemoglobin never falls as low as in chlorosis. Early phthisis is usually marked by a slight leucocytosis, slight diminution of the red blood corpuscles, and a moderate reduction in hemoglobin.

Laache has found 29 per cent. of tubercular chloroanemias in the early stages with a diminished hemoglobin. Labbe, who has investigated extensively, regards chlorosis as a symptom of some other affection often as a first manifestation of a latent tuberculosis. If we should consider chlorosis or the simple anemias just as a pleuritis to be many times nothing more than the initial evidence of a slumbering tuberculosis, the proper hygienic and medicinal treatment can produce a complete recovery. A number of cases of anemias showing with many of the other symptoms of impaired resistances enumerated have come under my observations during the last year or two. The method of treatment has proved so successful that the plan may be of interest.

I have selected only a few cases as a preliminary report, as it is necessary that six months or a year should elapse before we can determine our results. Even the therapeutic nihilist will admit that iron, arsenic and the hyphophosphites have a wide field of usefulness, and as these are used hypodermically the effects are more pronounced, more rapid and permanent. Wherever iron is indicated, it can be administered in the form of the green ammoniated citrate, while arsenic can be given as the arsenate of soda or the arsenate of iron. The injections are given deeply into the muscles of the buttocks or back. There is almost no pain attending the operation and in indicated cases the general feeling of well-being which follows the proper dosage allows the treatment to speak for itself. A blood examination should be made, after which punctures may be given daily. An increase of 5 to 10 per cent. hemoglobin a week can be expected.

It is unnecessary to consume time with a consideration of the therapeutic action of these substances. Nothing, however, has been written in English on the subject of the hypodermic use of these medicinals. Italian and French literature since 1890 has had much to say on the method, and the fact that it remains to-day as the usual treatment is sufficient recommendation for its usefulness.

The green ammonio-citrate can be introduced into the system without danger in doses ranging from .05 to .1 gram, while the arsenate of soda is given in .001 to .002 gram. The treatment should be started with the smaller dosage. A full dose of iron by this method produces a reaction within five minutes. A feeling of tension in the head is experienced, the face flushes and tingling sensations are noticed. There may be waves of nausea or sudden vomiting if a larger dose than 1½ grain is administered. A full dose gives a sensation of a warm flush or glow over the entire body. The pulse quickens and a general feeling of well-being follows the proper dose. The arsenate shows its usefulness as a general reconstructive and stimulant to nutrition. The hypodermic method obviates all injury to the teeth or stomach and constipation is not produced. It is contraindicated in fever and active hemorrhage. Iron and arsenic are too well known to need any argument in their favor. The hypodermic method produces all the good effects more promptly and without the serious results produced when these remedies are taken by the stomach.

The character of the pulse in determining the pretubercular stage of consumption is quite important. Dr. Wells, of Chicago, and Dr. H. P. Loomis have made excellent reports in regard to their findings along this line. Two prominent characteristics are noted. A change in position has but little influence on the very thin. The examination must be made some hours after eating and when the patient is free from excitement. Ordinarily the pulse is found to vary on an average of fifteen beats in a healthy man. I am unable to make practical use of this observation, as few patients under examination are not subject to the pulse effects of excitement. The relative feebleness of arterial pressure is an important sign. The normal arterial pressure of 15 to 18 is found by French investigators to be always less than thirteen and often only ten. The lessened arterial pressure may be nothing more than a factor in the problem of increased susceptibility. The pulse of lowered pressure is usually tense and hurried, 100 to 120. In the early stages of phthisis the sphygmograph shows a sudden ascent and descent of the curve. The arterial pressure can be readily taken in the office with a Gärtner's or preferably a Cook's pressure apparatus.

In conclusion, it is evident that no one or two signs can be relied on as conclusive proof of an approaching phthisis. Yet, taken together, we are given enough danger signals to warn us. Active measures may be enforced at this stage with the best results. If the strenuous fight against the ravages of tuberculosis was advanced to the latent tubercular stages, the stages of lowered resistance, consumption would not attain its high mortality. Hypodermic medication with iron, arsenic, hyphophosphites and strychnin offers a prompt and powerful reconstructive adjunct to the necessary pure air, good food and sensible hygiene.

HYDATID CYST OF THE LIVER IN CHILDREN.*

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In children, hydatid cyst of the liver appears to be a very rare disease, especially in the United States. Our text books on pediatrics dismiss the subject with but few words. Koplik, so far as I can find, makes no reference to it at all in the last edition of his work. Rotch says "Echinococcus cysts are so rare in early life that they need merely be mentioned as of possible occurrence." Holt says "Echinococcus disease of the liver, while rare among adults in this country, is almost unknown in children. I have been able to find but two recorded cases in America." American medical journals likewise pass the matter by without comment. In the Index Catalogue of the Library of the Surgeon-General's Office, brought up to 1903, there are but four references to the subject of hydatids in children, two in Italian literature, one in Russian, and one in French, but none at all in American journals.

This infrequency of the affection in children is not, however, a peculiarity of the United States. Peiper[1] says: "The number of children infected appears very small when we consider the fact that at this period of life, in consequence of close association with dogs, they are particularly endangered. This observation is confirmed by all statistics. In the Pomeranian investigation, among 139 patients, only 13 were under 15 years of age." It seems odd, therefore, that within ten years, with a comparatively small material falling under my observation, I have seen two cases of hydatid cyst of the liver in children. Because of the rarity of the affection at this time of life, it has seemed that reports of these cases deserve to be published in detail, and I present them with the hope that their publication may lead to the discovery of others on this coast.

CASE 1.—An Italian boy, aged 7, was brought to the children's clinic at Cooper Medical College, March 31, 1897.

History.—His symptoms were vague; occasional pain in the right side, head ache now and then, and during the week previous occasional vomiting spells. His appetite was fair, he slept well at night and his bowels moved regularly. The mother had noticed a swelling in the boy's right side about two years previous, that had never disappeared since its discovery, but rather had grown a little larger as time went by; and it was this that induced her to bring the child for examination.

Examination.—He was a bright, intelligent looking little fellow; his face indicated perfect health, but his body and limbs were somewhat emaciated. There was no icteric hue to be detected in skin or conjunctivæ. The tongue was heavily coated with a yellowish fur. In the region of the liver a swelling was perceptible on inspection, extending downward to the level of the anterior superior spine, and inward to the median line. On palpation this swelling was evidently somewhat tender; it was smooth in outline, not nodular; hard throughout most of its extent, but in one part, about three inches below the border of the ribs, was distinctly fluctuating; there was a sulcus or groove, perceptible to touch and to sight, running across the swelling just below the border of the ribs, apparently separating the mass below from the liver above. Finally, the lower border of the tumor was sharp and distinct, so that the examining fingers could easily be inserted beneath it; and the tumor moved on deep inspiration.

On percussion, there was dullness over the area of swelling, directly continuous with the liver dullness above, but not extending to the lower edge of the tumor as perceptible on palpation; for tympany replaced the dull note across the lowest portion of the tumor, over a zone about two inches in width. The dullness extended to the median line internally and to the axillary line externally. Directly back of the axillary line and posteriorly a tympanitic note was found, the dullness not extending in that region below the normal liver dullness. The urine was examined and found normal; the heart and lungs likewise gave no evidence of disease.

Ordinary means of examination were supplemented by the use of the *x*-ray, at that time still a novelty. The fluorescent screen showed the upper border of the liver, rounded and distinct, rising and falling with each respiration; but it failed to give any idea of the relation of the parts below the level of the ribs, and, therefore, left the character of the tumor as much in the dark as before. It was next decided to resort to diagnostic aspiration with a needle at the point where fluctuation had been found. By this means a fluid was obtained that was turbid and looked like thin pus. Under the microscope it showed broken down pus cells but no hooklets of hydatids.

Diagnosis.—Plainly the differential diagnosis concerned two organs: the liver and the right kidney. With regard to the liver, was this a malignant tumor, an abscess or a hydatid cyst of this organ? With regard to the kidney, was it a sarcoma or a pyonephrosis? Malignant tumor of the liver was excluded by the smooth contour of the swelling, the normal upper border as shown by the *x*-ray, the slow growth of the mass and the moderate emaciation and constitutional disturbance of the child. Liver abscess could not be positively excluded; it is rare in children, but its main signs are those that were present in this case, viz.: enlargement of the liver, usually downward, with tenderness over the swelling; and its chief symptoms are gastrointestinal—coated tongue, loss of appetite and occasional vomiting. The symptom lacking from the clinical picture of liver abscess was fever, which was never found in this boy during the time he was under observation. Nevertheless this condition was looked on as one of the possibilities, especially after the hypodermic needle showed the presence of pus in the swelling. As for hydatid cyst of the liver, there was nothing to speak for it, after the microscope failed to show hooklets in the fluid withdrawn by the needle. If this fluid had been clear, chemical examination would have been made for albumin and sodium chlorid, even though no hooklets were found with the microscope; but its turbidity misled us and this chemical examination was not made. There was no characteristic fremitus present, such as is supposed to be a diagnostic sign of hydatid cyst, and nothing in the clinical history pointed to this affection more than to another.

The argument in favor of the kidney as the point of origin of the tumor, rather than the liver, was the apparent line of demarcation between the lower surface of the liver and the tumor proper; for there was a depression across the swelling, just below the lower border of the ribs, which could be both seen and felt. In favor of a diagnosis of sarcoma of the kidney was the fact that the tumor had pushed the bowel in front of it, and, therefore, came probably from behind the peritoneum. The condition is not uncommon in childhood and the character of the tumor it produces is not unlike that which was presented here. The point against sarcoma was the absence of bloody urine at any time. The diagnosis of pyonephrosis had as its basis the pus found on aspiration, and the chemical examination made of the fluid obtained, to determine whether it was urine. The addition of nitric acid to this fluid after partial evaporation gave crystals, which under the microscope strongly resembled those of nitrate of urea.

Operation.—In any case it was evident that operation was necessary, and that an exploratory incision would reveal the exact nature of the swelling and determine the proper plan of procedure. This was, therefore, advised, the parents consented and the boy was sent to Lane Hospital, where he was operated on by Dr. Emmet Rixford, April 11. When the abdomen was opened it was seen at once that the tumor involved the structure of the liver; but it was thought, from the surface appearance, to be an abscess of the liver, and the organ was, therefore, stitched to the edges of the incision, the wound packed with gauze and the boy put back to bed to await the formation of adhesions before opening the abscess.

* Read before the California Academy of Medicine, March 29, 1906.

1. Peiper: "Echinococcus Disease," Deuts. Klin.,

The secondary operation was performed April 14, 1897. On incising the tumor, instead of a gush of pus, as was expected, there came out a thin turbid fluid and numerous transparent, glistening cysts, the size of small grapes, that at once settled the diagnosis as hydatids. The cavity was washed out and the wall of the mother cyst removed. This cyst when distended must have measured between 4 and 6 inches in diameter. After its removal, there still seemed to be too much liver left for so small a boy. A long hypodermic needle was, therefore, passed from the cyst cavity upward into the liver beneath the ribs, and with this there was withdrawn perfectly clear, transparent fluid. An incision was then made in the track of the needle, and another cyst, equally as large as the first, evacuated of its contents of fluid and daughter cysts. Drainage tubes were inserted, the wound dressed and the boy put back to bed. He made a slow but perfect recovery. The purulent fluid obtained with the hypodermic needle before operation came from the lower cyst, which had begun to suppurate. The upper cyst, lying beneath the ribs, contained the characteristic clear fluid of hydatids. The groove across the swelling, which had proved such a stumbling block in diagnosis, was the depression between the upper and the lower cysts. The two were separate and perfectly distinct.

CASE 2.—A boy, aged 10, was brought to the children's clinic on Jan. 4, 1906. He was born of Italian parents in Buenos Ayres, Argentine Republic. In May, 1903, the family had moved to Oregon, and again one year later to the San Joaquin valley, California, where the boy lived until he was brought to San Francisco in November, 1905, on account of his health.

History of Disease.—His illness dated back two years to an attack diagnosed typhoid fever, which lasted for only three weeks. Following that attack he remained weak and complained much of pain and fullness in the right side, especially on stooping to pick up objects from the floor. It was then discovered that he had an enlargement in the right side of his abdomen, which never subsequently disappeared. In October, 1905, he had an attack of fever, with increased pain in his right side, this attack lasting three days. He was then brought to San Francisco, on the advice of a Fresno physician, and taken to the Children's Hospital. He remained under observation in that hospital for six weeks. His parents were finally told that the boy had an enlargement of the liver, but that the case was not one for operation. Then in the search for further advice his parents brought him to the Cooper College Dispensary.

For two years the boy had persistently complained of a sense of weight and fullness and frequently of sharp pain in his right side; but during this time had gained in flesh and had never seemed ill except for the feverish attack in October, 1905. He had always had a good appetite, there was no vomiting, his bowels were regular, there had never been any jaundice, and never any edema of feet or limbs.

Examination.—On physical examination he was found to be a well-nourished, healthy-looking boy. The heart and lungs showed no disease, the urine analysis was normal. The feces showed no abnormalities. In the region of the liver a rounded mass was visible, extending as low as the navel and as far internally as the median line. This mass was smooth, rounded and elastic. Manifestly it took its origin from the under surface of the liver, because the sharp lower edge of the liver could be felt projecting from the tumor's upper surface, just below the border of the ribs. The mass did not seem to be at all tender. No hydatid fremitus could be elicited. Percussion dullness was found over the mass, continuous above with the normal liver dullness, the total extent in the mammary line being 19 c.m.

Blood Examinations.—Numerous blood examinations were made by Dr. H. R. Oliver. On January 4 the hemoglobin was 80 per cent., the red corpuscles 4,250,000, the white corpuscles 25,000; and the differential count showed: polymorphonuclears 68 per cent., large lymphocytes 8, small lymphocytes 24, eosinophiles 2. January 6 the leucocytes numbered 14,000; January 14, 15,000. January 22 the hemoglobin was 70 per cent., the red corpuscles 3,750,000, the white corpuscles 16,000, and the differential count as follows: Polymorphonuclears 70 per cent., large lymphocytes 3 per cent., small lymphocytes 25 per cent., eosinophiles 2 per cent. From these reports it will be seen that while a leucocytosis of moderate grade was constantly present, there was never any marked increase in the eosinophiles.

Diagnosis.—From the physical examinations repeatedly made it seemed clear that the liver was the organ concerned, that the tumor originated from it, that this tumor contained fluid of some sort, and was not simply the liver of chronic passive congestion, fatty infiltration, or hypertrophic cirrhosis. Malignancy was excluded by the boy's state of blood and nutrition, and specific disease by the lack of history or signs. The conclusion was therefore inevitable that we had to do with either hydatid cyst or abscess. In favor of hydatid cyst was a history of constant intimacy with dogs, with which pets the boy had been closely associated in Buenos Ayres, with the absence of chills, recurring fever, emaciation, or constitutional disturbance during the two years that the enlarged liver had obviously been present. In favor of abscess there was nothing except the leucocytosis, which was not so high as it should have been, with sepsis, and lacked the characteristic predominance of polymorphonuclears. To settle the diagnosis an aspirating needle was introduced through the abdominal wall January 20, directly over the lower portion of the tumor, where elasticity seemed most definite. The needle at the first puncture withdrew the clear, water-like fluid diagnostic of hydatid cyst, and in this fluid hydatid hooklets were at once found with the microscope. The diagnosis thus being positively settled, the case was transferred to the surgical clinic for treatment.

Operation.—On January 23 the boy's abdomen was opened by Dr. Stanley Stillman at Lane Hospital. The cyst was found to originate from the under surface of the liver. It was aspirated, and when empty the wall was peeled from its bed and so removed intact. No daughter cysts were found within its cavity. When distended, it measured about 5 inches in diameter. The wound was drained and the boy made a good recovery, except for a fistulous track that healed slowly.

DISCUSSION OF THE DISEASE.

The points bearing on the diagnosis of hydatid cyst of the liver in children, as brought out by the preceding cases, are the following:

1. *History.*—Inquiry should always be directed to the child's intimacy with dogs. The second child lived with dogs in Buenos Ayres, played with them, slept with them, ate with them, and kissed them. As the *Tænia echinococcus* is a parasite of the dog family, such a history is extremely suggestive of the possibility of infection of the child. The history of illness is mainly one of symptoms due to mechanical pressure by the cyst: pain, fullness, weight, dragging and interference with movements such as stooping, together with gradual enlargement, visible to parents and to child. The general health—digestion, nutrition, strength—is interfered with slightly or not at all, even though the symptoms last for months or even years. Fever is not a symptom unless the cyst has suppurated, and then the clinical history may become one of sepsis, as from any other collection of pus.

2. *Physical Examination.*—It is usually easy to determine that the tumor is situated in the liver, though the problem is not always a simple one, as the first case reported proves. The fact that the tumor contains fluid of some sort is also usually apparent from its rounded outline and the elastic feel of it. But the peculiar thrill described as the hydatid fremitus is not always present—it was certainly absent in both the cases reported, and therefore can not always be depended on for diagnosis.

The aspirating needle best answers the question as to what the cyst contains; and the clear, transparent fluid of a hydatid cyst is diagnostic even to the naked eye. It must not be forgotten, however, that the introduction of an aspirating needle into a hydatid cyst is not without

danger. In addition to the possibility of damage to blood vessels or to intestines, such as exists with any puncture of the abdominal cavity, there are in this instance two other dangers: (a), autosemination, or the scattering of hooklets in the abdominal cavity by subsequent oozing from the cyst at the site of the puncture; or, (b), symptoms of poisoning such as fever, nausea, vomiting and collapse, due to the toxicity of the fluid and its absorption after leaking out at the site of puncture. These dangers must be borne in mind and diagnostic puncture should not be looked on as a procedure without risk.

3. Laboratory Examination.—Under the microscope the sediment from hydatid fluid usually shows the peculiar bodies called hooklets, found in no other fluid but this; but their absence does not negative the diagnosis. The blood usually shows a moderate leucocytosis, persistent so long as the cyst remains; but the eosinophiles are not necessarily increased here, though Cabot says: "Eosinophilia is the rule in hydatid disease without suppuration."

Except for the examination of the hydatid fluid obtained by diagnostic puncture, and except for the blood count, there are no methods of laboratory diagnosis available in these cases.

BACTERIURIA.

REPORT OF A UNIQUE CASE.

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I believe the importance of this affection to be generally underestimated and am positive that the condition is vastly more common than is generally supposed.

The term bacteriuria implies the presence of bacteria in the urinary tract above the compressor urethræ muscle. Micro-organisms are always present in the normal male urethra, certainly its anterior portion, and may be found in the urine of most people provided it is voided through this structure. Aside, however, from the trivial urethral discharge occasionally provoked by certain of these organisms, their presence in the anterior urethra causes no symptoms. Apart from the bacteriuria, which always exists as a part of pyuria, there is a simple bacteriuria, without pus, or at least such small quantities of this as to be of minor clinical significance. There is this difference regarding the etiology of the two affections: Pyuria always indicates suppuration in some part of the urogenital apparatus; simple bacteriuria may indicate the earliest or terminal phenomenon of true inflammation with little or no pus formation, or an eliminative process, the bacteria being deposited in the urinary conducting apparatus from the blood and lymph, or having gained entrance to these organs, through continuity or contiguity from anatomically related structures.

The organisms most frequently deposited in the urine from the circulation include the typhoid bacillus in cases of typhoid fever, the tubercle bacillus in miliary tuberculosis, staphylococci and streptococci in general septicemia and pyemia, rarely the pneumococcus, and the undetermined organisms of scarlatina and smallpox, as manifested by the urinary phenomena of these infections.

From continuity and contiguity of structure, the most frequent causes of bacteriuria include urethritis, prostatitis, seminal vesiculitis, colitis, enteritis, perinephric abscess, peritonitis and any focus of inflammation in the female generative organs. Every case of spinal cord disease with paralysis of the sphincter vesicæ is attended by bacteriuria.

MICRO-ORGANISMS CAUSING THE CONDITION.

By far the most frequent organism causative of simple bacteriuria is the *Bacillus coli communis.* These organisms readily gain entrance from the intestine in cases of chronic constipation, acute enteritis, dysentery, colitis, typhoid fever; or from the prostate, seminal vesicles and urethra, where they are abundant in chronic inflammatory processes involving these structures. They frequently enter along the ducts leading to the bladder and are carried by instruments from the urethra. In women with unclean habits, relaxed sphincters, fistulous communications or even slight wounds of the genito-urinary organs, bacteriuria is common. Ascending vulvovaginitis is a common cause. From perinephric abscess, the colon bacillus and other organisms penetrate the kidneys. From the intestine and all retroperitoneal sources they may enter the ureters. Many cases of bacteriuria are consecutive to colitis and frequently a history of dysentery may be elicited.

Generally, the colon bacillus is found in all forms of bacteriuria, often in pure culture. In the typhoid form of the disease they may be associated, but often the typhoid bacillus is present alone. Of 132 cases reported by Elliott, the *Bacillus coli communis* was the infective agent in 75. Other bacteria found were streptococci, staphylococci, bacillus proteus, bacillus subtilis, sarcinæ and undetermined bacteria, alone and in combination.

FREQUENCY OF THE AFFECTION.

The frequency of the affection can scarcely be even approximately estimated. A single intravesical instrumentation practically always carries with it bacteria from the urethra. Such bacteriuria is generally transient in duration. Should the bladder or posterior urethra be traumatized by the operation it will almost certainly result in inflammation.

Proctitis, hemorrhoids and other lesions in the rectum are attended by bacteriuria so frequently as to make it safe to believe that this complication exists in nearly every case. Its frequency in old women and as an eliminative process in cases of typhoid and many other infectious fevers have been mentioned. Typhoid bacilli exist in the urine in from 20 to 30 per cent. of cases of typhoid fever usually in pure culture, appearing generally in from the second to the third week of the disease, commonly associated with albuminuria, without pus, and rarely producing the morbid changes of cystitis, even though they persist for years. Young, however, reports two cases of true chronic cystitis due to the typhoid bacillus.

PATHOLOGY.

With the exception of hyperemia and excessive mucous secretion along the whole urinary tract and generally slight albuminuria, simple bacteriuria in a healthy, well-drained urinary apparatus produces none of the changes of true inflammation. In the presence of partial or complete obstruction or diminished vital resistance in these structures, it is easy for a simple bacteriuria to cause the phenomena of true inflammation with pus formation.

SYMPTOMS.

When first voided, the urine is cloudy, generally acid in reaction and of a penetrating, offensive odor. The turbidity is diffuse, does not settle on standing, and can

not be removed by acidulation, filtration or sedimentation. The bacteria may be sedimented by centrifugation after the addition of alcohol. There may or may not be a trace of albumin. Microscopic examination shows a field swarming with actively motile bacteria.

The local symptoms when present are: Generally slight frequency of micturition, mild *ardor urinæ*, occasionally incontinence, and in children there may be nervous disturbances. Rarely a slight mucoid urethral discharge may be noted. So long as the epithelium of the urinary tract remains healthy there is no absorption of bacterial toxins. If abrasions exist, or if from the imperfect drainage incident to prostatic hypertrophy or urethral stricture, the bladder epithelium from prolonged contact with the concentrated toxins loses its vitality, absorption occurs, and mild fever, with lassitude and digestive and nervous disturbances, may be noted. In many cases there are no subjective signs.

DIAGNOSIS.

It is essential to distinguish simple bacteriuria from that in combination with pus. In the latter there is always positive pyuria, in the former never so. Pyuria implies an area of suppuration in some part of the genito-urinary tract and is generally associated with symptoms referable to its location.

As to the point of entrance of the micro-organisms into the urinary tract, it may be said that whenever they enter through the kidneys as in septicemia, typhoid or scarlet fever, there is always a positive albuminuria. When they enter below the renal pelvis, as from the genitalia and from the lower intestinal tract, from instrumentation, ascending inflammation, pelvic disease, colitis or proctitis, the presence of albuminuria is dependent on the previous condition of the kidneys

As to the nature of infection, alkalinity of the urine always means infection by either the staphylococcus or bacillus proteus vulgaris. All other organisms, save when mixed with these, produce an acid urine. The history of the case will suggest the probable causative organism, though it must be remembered that the colon bacillus is by far the most frequently found germ.

TREATMENT.

Treatment has for its purpose removal of the cause, prevention of true inflammation and elimination of the organism.

Intestinal and urinary antiseptics, such as urotropin salol or boric acid, with large amounts of drinking water, are indicated. Vesical instrumentation and (unless cystitis is actually present) irrigations are to be avoided. The traumatism incident to these procedures is apt so to diminish local resistance as almost certainly to result in true inflammation. Many cases of postoperative cystitis can be avoided by judicious efforts to avoid catheterization. In patients with spinal cord lesions associated with paralysis of the compressor urethræ muscle, bacteriuria is a constant attendant affection; and when, in addition to this, ammoniacal urine is allowed to be retained, cystitis is sure to result. Since in these patients the cause of death is so commonly ascending urinary infection, the dangers of bacteriuria should be recognized. Every one knows the importance of thorough, gentle and rigidly aseptic bladder drainage as a part of the treatment of these cases.

For the cases so frequently dependent, especially in old people, on colitis and constipation, free purgation, with regulation of diet and intestinal antiseptics, are essential. Janet often practices, in addition, colonic lavage for two or three months.

REPORT OF A UNIQUE CASE.

History.—An obese, slightly sclerotic, ignorant, partially deaf maiden, aged 55, suffered during the summer of 1905, a a rather severe attack of dysentery. Within a month after this, she began to notice frequent burning urination and the passage of foul, intensely turbid urine, the act of micturition being followed by a sensation of having incompletely emptied the bladder, but at no time did she pass blood or gravel. These signs became progressively but gradually more marked and caused her great mental anxiety, fearing that she was suffering from some dreadful disease. She consulted her local physician, who at once made a vaginal examination. She was told that there was a peculiar "growth" in her vagina, and the physician removed a piece of this and sent it to a pathologist for microscopic examination. The latter reported the tissue to be fibroid in character. Ever since the tissue was removed she has concentrated her mind on the genital apparatus and has been in constant fear of cancer.

She was referred for treatment to Dr. Stuart McGuire, to whom I am indebted for the privilege of studying and reporting the case.

Examination.—Vaginal examination showed a small, rigid canal with the hymen present and save in the upper portion intact. In the upper portion there was a wedge-shaped deficiency of about one-half inch. When she stands erect, there is slight bulging of the anterior vaginal wall.

Cystoscopic examination showed slight general redness of the mucous membrane of the bladder, but no real sign of disease.

Urine.—The first specimen was so extremely turbid as to give at first sight the appearance of chyluria. This material, however, was not present. The turbidity was diffuse and did not precipitate on long standing. The urine was foul and penetrating in odor, acid in reaction and contained no albumin. Microscopic examination showed amorphous acid urates, and every field was swarming with motile bacteria, but pus was absent.

REMARKS.

A diagnosis of bacteriuria was positive and this was the source of all the trouble. The growth in the vagina was the hymen, from which a wedge-shaped piece had been removed. The slight bulging of the anterior vaginal wall which was not sufficiently marked to be called cystocele was doubtless due to the incision in this structure produced for removing the wedge-shaped piece of hymen. The woman was the victim of pronounced cancerophobia.

The bacteriuria in this case definitely followed dysentery; the organisms entered the urinary apparatus below the kidney, as shown by the absence of albumin.

506 East Grace St.

THE STRENUOUS LIFE AND ITS EFFECTS IN DISEASE.*

S. T. RUCKER, M.D.

MEMPHIS, TENN.

At the outset I desire to state that I am not opposed to the strenuous life when it is safeguarded by proper diversion and sufficient rest; but there is a wrong way to live the strenuous life, and it is of this I desire to speak. Work, *per se*, never kills, but it is the way one works. A bank account kept by continuous deposits in excess of the checks drawn is a good business method. It is when the account is overdrawn that one receives notice to make good the deficit. Mental and physical exercise in legitimate channels is good. It promotes health, happiness and a long life, but when by prolonged endeavor under high pressure an individual overdraws

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his supply of energy he must replenish it or suffer the consequence. The temperate life, the systematic methods of diversion and relaxation as practiced by Mr. Gladstone, the great English statesman, and Grover Cleveland, twice president of the United States, is well known and will serve to illustrate the proper way to live the strenuous life and to succeed without sacrificing health and strength. Mr. Gladstone not only had regular times for diversion and recreation, but when the affairs of state became too onerous and tiresome he would turn loose all duties and go to his country home to rest. There he would walk, run, chop wood and do other exercises to divert the mind and to invigorate the body. At 85 years of age he retired from the premiership of England in good health and with a clear, active mind. We are all familiar with Mr. Cleveland's fondness for fishing and hunting, and remember while he was president how often he would lay aside official duties and go to the bays of Virginia or North Carolina to indulge in his favorite sport. At 70 years of age he is still in active life, hale and hearty. The quality of a man's thought, energy and ideals depends largely on the condition of his health. The now famous saying credited to Dr. Osler that a man is practically useless after 60 years of age is true of most men, but it should not be, and would not be, if we would remember that "all work and no play makes Jack a dull boy." Every busy man should have a hobby to which he can devote his leisure; he should also have seasons for sport in the country, like hunting and fishing. A married man should spend more time with his family and in reading wholesome literature. Sunday, the best day of all for rest and recreation, is perhaps the most neglected. It is not only a religious duty to cease all labor every seventh day, but it is essential to the health and well-being of man. He will do better work and live longer.

HIGH PRESSURE OF EDUCATION.

The physiologic functions of the human economy are governed by the simple law of demand and supply. The executor of this law is the cell. It contains a life principle called the nucleus. The nucleus gives the cells energy and the power to reproduce themselves rapidly and manifold, when supplied with the proper food, as found in the healthy blood current. Every tissue and part of the body is an aggregation of cells, like the bricks that make up a wall. The process called metabolism is cellular activity. By thought and muscular action tissues are consumed; by cell proliferation they are replenished. In order that the proper equilibrium be maintained in this process and the cells be not consumed faster than they multiply, it is decreed that we must take time to eat, rest and sleep. Prolonged endeavor, overwork and worry, with insufficient food and rest, break the equilibrium, exhaust vitality and invite disease. This condition is too prevalent in our American life. We go under high pressure and our pace is too rapid. Our schools and colleges, where we should be taught how to live, are not free from this spirit of stress and strain. Students are goaded to tasks beyond their powers, and, being anxious to stand at the head of their classes, they hurry their meals, overstudy, take little time for rest and, as a natural consequence, many become nervous wrecks. I have under observation now a patient who is a sad illustration of this forcing method of pedagogy. He had an active mind and bright prospects ahead for a useful career. He studied hard and was stuffing for his final examinations before graduating from college, when a collapse came, and his mind was left a chaotic wreck. There is a mental incoordination and an inability to concentrate his thoughts. His talking and writing are centrifugal and erratic. I have undertaken the task of re-educating him into mental co-ordination and concentration, with probabilities of never succeeding.

Analyze the graduating classes of the best female colleges, and the crop of neurasthenic girls will out-number those who are able to enter on the duties of married life. I have under treatment now one of these unfortunate girls. She is anemic and her brain is not properly nourished. Her mind is unstable and her ideas are erratic. She has overdrawn her account and is now trying to make good the deficit by rest and forced feeding.

BUSINESS LIFE TOO STRENUOUS.

In business and professional life the conditions are even worse. The average business man is always worried and overworked. He has no leisure. He sees so little of his family they scarcely know him. He is chained to commercialism of thought and taste. He worships it by day and dreams of it by night. His business methods become questionable and pernicious. He takes all the law allows, and does the other fellow if he can. He makes money, makes it honestly if he can, but makes it. After all, it does not pay. It is like chasing a phantom. He pursues his business to a certain point, then his business pursues him. He is no longer in control. He thinks in a circle and acts like an automaton. He is a slave to his business and can't turn loose—until perhaps he is released by sudden death or is sent to a sanitarium, broken in health, to die without enjoying the pleasures of a long life that is due him.

A striking coincidence is that as our strenuous civilization progresses the number of cases of mental and nervous diseases increases. There is hardly a state institution that is not overcrowded. Texas is just completing additional buildings to accommodate the increasing number of insane patients, and applications now on file show more than 600 patients seeking admission that can not be accommodated when the hospital is completed. Besides these state institutions, there are scores of private sanitariums for treating the milder cases of these unfortunate patients. Nervous breakdown has been called our national disease, and not without good reason. Arteriosclerosis, a disease largely due to nervous strain and hyperarterial tension, formerly a rare disease, is now prominently and extensively treated of in leading text-books on practice.

Another striking illustration of the effect of our strenuous civilization in producing disease is the rapid increase in the number of deaths from heart disease. One hundred and twenty-five persons died recently in one week in New York City from heart disease, while the deaths for the corresponding week in 1904 were 56.

Another phase of this subject I would like to treat of at length, but for lack of time I will only say enough to provoke discussion or start you to thinking. The stress and strain, worry and anxiety attendant on fierce competition in business and professional life is enervating and devitalizing. It embarrasses or suspends organic function and lessens resistance to morbid influences. As a consequence we fall easy victims to almost any disease, such as pneumonia, tuberculosis, typhoid fever, cancer and grave kidney lesions. If a man who lives this kind of life undergoes a surgical operation of any consequence, it is exceedingly hard for him to recover. His vitality is so lessened that any traumatic lesion will probably undergo necrosis or gangrene instead of healing.

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN.

CHAPTER XXV.

GENERAL ANESTHETICS.

The subject of general anesthesia concerns the surgeon much more than it does the physician, but, as in the matter of antisepsis, the physician must have some knowledge of this subject, and we shall, therefore, briefly consider the more important members of the group of general anesthetics, their uses and their probable limitations.

Narcotics have been used from time immemorial, for producing unconsciousness during surgical operations, but nitrous oxid has been in use longer than any other agent now employed for inducing general anesthesia. It is more than 100 years since Sir Humphrey Davy first suggested this use for nitrous oxid, but his suggestion met with no response, and it was not until many years later, in 1844, that Horace Wells, a dentist of Hartford, Conn., employed it for that purpose and thus introduced what he was pleased to term "a new era in tooth-pulling."

It was at one time supposed that nitrous oxid caused unconsciousness merely through asphyxia, and while this is a very important factor, it has been shown that nitrous oxid also causes a depression of the central nervous system resembling that of the methane derivatives such as chloroform and ether, and complete anesthesia has been produced without asphyxia by using a mixture of oxygen and nitrous oxid under pressure. This would probably constitute an ideal method of inducing anesthesia were it not for the mechanical difficulties and the expense that it necessarily involves.

Nitrous oxid is usually administered only for a short time, it being necessary to discontinue it so soon as marked cyanosis of the face occurs, after which the anesthesia lasts for about a minute or two. It is the safest agent which we possess for general anesthesia, the death rate being approximately one in half a million cases, but aside from its use in dentistry and for inducing unconsciousness, preliminary to other anesthetics, its application is extremely limited.

It is impossible to estimate the value to mankind, and to surgery in particular, of the introduction of anesthetization with ether by Morton and Jackson just fifty years ago. Its use by Dr. Crawford W. Long, in Georgia, antedates by more than two years the real work of Morton and Jackson in introducing the method, but the greatest credit is due those men for their splendid achievement in gaining general recognition for this boon to humanity.

Shortly after the introduction of general anesthesia by the use of ether Sir J. Y. Simpson announced his discovery of the use of chloroform as an anesthetic, and this latter agent soon displaced ether almost entirely in many parts of the world. Even at present chloroform is used almost exclusively in England and in several other European countries.

From time to time other agents have been proposed as substitutes for chloroform and ether, and some of them have enjoyed a greater or less popularity for a time, only to sink into obscurity.

In this connection we may mention a few of those which will be remembered even by the younger generation of physicians, and which have not yet fallen into complete disuse.

Ethyl bromid and bromoform have been used to some extent as general anesthetics, and it has been suggested that the typical bromid action might be obtained from them, but the action is that of the entire molecule. Both of these have passed almost completely from use as general anesthetics, largely, perhaps, because of the unstable character of the substances themselves and the accompanying uncertainty of the action of the decomposition products.

Petroleum ether, or benzin, because of its cheapness, is sometimes used in vivisection experiments, but not on man.

The use of mixtures of varying composition appears to offer a peculiarly interesting field for experimentation in connection with general anesthesia.

Of the several mixtures that have been used from time to time, that popularly known as the A. C. E. mixture, containing 1 part of alcohol, 2 parts of chloroform and 3 parts of ether, is perhaps the one that has been used most widely. This also referred to occasionally as the one-two-three mixture, was, at one time at least, quite popular in England. While it has been urged against this mixture that the differences in volatility of the three substances prevents the anesthetist knowing just what he is administering, it is a fact that the vapors of all three tend to pass off together, and, furthermore, the object is to induce anesthesia and to avoid an excess of the anesthetic and the action of the mixture seems to be as easily controlled as that of chloroform, while not so much is required as of ether alone. The alcohol and chloroform raise the boiling point of the mixture above the temperature of the lungs and this probably secures some of the advantages claimed by Schleich for the mixture of ether, chloroform and benzin.

A mixture containing 57 parts of ether and 43 parts of chloroform has been suggested as having some advantages over either of its component parts. It was at one time quite widely recommended under the title of M. S. mixture, but appears to have fallen into disuse, having probably no advantage over the better known A. C. E. mixture mentioned above.

Dr. Carl Ludwig Schleich of Berlin some years ago recommended the admixture of 5 per cent. of petroleum ether, or benzin, with ether and chloroform, as a general anesthetic. This preparation had been used by Schleich in nearly 500 cases in which he obtained excellent results, such as absence of excitement and of the excessive salivary discharge so frequently seen with ether, while the depressing effect of chloroform on the heart was not observed. Despite these and other advantages, which he cited at the time, the mixture never attained much popularity, and even Schleich himself appears to have discontinued its use in favor of an ethyl chlorid mixture.

The mixture of ether, chloroform and ethyl chlorid has been proposed at different times and in varying proportions; the one proposed by Schleich contains 2 parts of ethyl chlorid, 4 parts of chloroform and 12 parts of ether, and is fairly representative of this class.

The advisability of using mixtures of any kind, for general anesthesia is still an open question, particularly in view of the fact that the several chemical substances themselves are far from being absolutely stable, even under the most favorable conditions, chloroform particularly being readily decomposed and forming, as one of the possible decomposition products, the really dangerous substance known as phosgene.

Magnesium Sulphate.

S. J. Meltzer has recently suggested the use of a solution of magnesium sulphate for inducing general anesthesia. For this purpose he advised the intraspinal injection of 1 c.c. (15 minims) of a 25 per cent. sterilized solution of magnesium sulphate for each 25 pounds of body weight. This method possesses no advantage over cocain used in the same way for producing anesthesia of the lower parts of the body, but general anesthesia is induced and persists for some hours, and the method, therefore, may possibly prove serviceable in controlling the convulsions of tetanus.

Marked depression of the respiration occurs, and Maury and Teague, working with guinea-pigs and injecting the solution intraperitoneally have found that the repetition of the primary anesthetic dose, on the following day, sometimes causes death. It must, therefore, be used only with extreme caution. The sudden introduction of a small quantity of this solution into the blood vessels will immediately prove fatal.

Scopolamin-Morphin and Similar Solutions.

Reference has been made to the use of scopolamin-morphin for producing anesthesia, and while a number of deaths are reported as having attended its use, the combination is still being recommended by some as constituting a satisfactory method.

Morphin sulphate alone or in combination with atropin sulphate is very commonly employed preliminary to chloroform or ether narcosis, and appears to have well established uses in this connection.

E. Fraenkel reported some ten years ago that he had habitually used a mixture of morphin, atropin and chloral for hypo-

dermic injections, preliminary to narcosis, for twenty-two years, without an accident. He claimed that this procedure lessened to an extraordinary degree the amount of chloroform or ether used to maintain anesthesia.[1]

1. The solution used by Fraenkel was made as follows:

Morphin muriate	gr. iiss	15
Atropin sulphate	gr. ¼	015
Hydrated chloral	gr. iv	25
Distilled water	ʒss	15

He injected hypodermically from 1 c.c. to 1.25 c.c. (15 to 19 minims) fifteen minutes before the commencement of the ether or chloroform administration.

Fraenkel further asserts that this mixture is free from the objectionable side actions of morphin, being well borne by patients who could not take morphin by the mouth or hypodermically.

Ethyl Chlorid.

A substance which bids fair to rival chloroform and ether as a general anesthetic, under certain conditions at least, is ethyl chlorid.

This substance is extremely volatile, boiling at from 12.5 to 13 C. (54.5 to 55.4 F.), and it is necessary, therefore, to keep it in sealed tubes. The ends of the tubes are drawn out to fine capillary tubes which are then sealed, or the capillary opening is closed by a metal cap which may be replaced when a part of the contents of the tube has been used. When required for use the glass tip is broken off, or the metal cap unscrewed, when the heat of the hand causes the ethyl chlorid to volatilize, forcing out a fine stream which may be directed against the surface which is to be frozen for local anesthesia, or the stream may supply the vapor for inhalation to produce general anesthesia.

Ethyl chlorid induces anesthesia more rapidly than ether does, and when it is withdrawn the patient recovers more quickly, thus saving an average of some twelve minutes on each operation, hence it is likely to prove useful on the battlefield and in great calamities when a number of operations must be performed with a minimum loss of time.

Figures purporting to give relative degrees of danger for various anesthetics are notoriously unreliable, but it seems probable that ethyl chlorid is less dangerous than chloroform and somewhat more dangerous than ether. Among the objectionable features of ethyl chlorid are increased cost, the explosive character of the vapor, extreme volatility, the accompanying waste of material and the difficulty of administration.

Action of Chloroform and Ether.

It would hardly be profitable to discuss here in detail the actions of chloroform and ether, but there are certain important points concerning them which are so frequently overlooked that we will consider them briefly.

While there are records of as many as 40,000 consecutive anesthetizations with chloroform without a fatality, this is only possible in the case of skilled anesthetists working with carefully selected cases. Certainly no such results are possible in ordinary practice, and with that alone are we concerned at present.

We must always remember that the production of general anesthesia is a grave matter in which death is an ever present possibility despite the utmost care, and of which there is actual danger unless caution is observed. The possibility of fatal complications in all cases of general anesthesia would appear to make it necessary that the patient or his friends be informed of this fact, if for no other reason than to protect the physician administering the anesthetic.

Each case must be carefully considered when selecting the anesthetic, and neither chloroform nor ether should be used exclusively. Ether being the safer, however, should have the preference, when it is not contraindicated, and chloroform should not be used unless the anesthetist is experienced and is reasonably skilled in the use of it.

The following are some of the principal advantages and contraindications of both of these agents:

The vapor of ether is inflammable, that of chloroform is not, and the latter is to be preferred when operations are to be performed by gas or lamplight. In this connection, however, we must not forget that chloroform vapor coming in contact with an open flame is readily decomposed into chlorin and hydrochloric acid, and that it will be necessary, therefore, to provide for free ventilation to eliminate these decomposition products. If ether must be used under such circumstances, the light should be placed as high above the level of the mask as practicable, since ether vapor is heavier than air. The thermocautery, of course, can also ignite the vapor of ether.

An acute cold is a contraindication to the use of any anesthetic, but more particularly to the use of ether. Ether is also contraindicated in bronchitis, because of the great irritation caused by the relatively large amount necessary to maintain anesthesia; it is likewise contraindicated in nephritis, since the kidneys take part in the excretion, and, of course, suffer from the irritant action.

In extremely hot weather, that is, when the thermometer is above 93 to 95 F. (34 to 35 C.), ether is volatilized so rapidly that the atmosphere contains amounts which may prove objectionable, and it often becomes very difficult to maintain complete anesthesia.

When it is absolutely imperative to reduce the stage of excitement to the minimum, or when it becomes necessary to secure complete anesthesia rapidly, ether is contraindicated and chloroform is to be preferred when it is not specifically contraindicated for other and more important reasons. In the latter event ethyl chlorid may be used, or preliminary unconsciousness may be induced by nitrous oxid, and this followed up by the use of ether.

Chloroform is very commonly preferred by obstetricians, but deep anesthesia is not usually induced in such cases.

In fatty disease of the heart chloroform is contraindicated because it also induces fatty degeneration of that organ, and for this reason it is not advisable to use it repeatedly on the same person in succeeding operations.

Chloroform is much more toxic to the heart than ether, and there is a much narrower margin of safety between the amount necessary to induce anesthesia and that which causes death, chloroform being thirty-six times as active as ether in inducing anesthesia, but forty-eight times as toxic.

A matter of the greatest practical importance, especially for the unskilled anesthetist, is the very brief interval between the cessation of respiration and the stopping of the heart beat with chloroform, giving very little chance to resuscitate the patient after respiration has stopped. With ether the interval is much longer, and the prompt resort to artificial respiration, while the body is raised higher than the head, very commonly results in saving the patient.

This variation in the action of anesthetics and also the fact that the condition of anesthesia is a dangerous one, according to the degree to which it is carried, will be more fully appreciated if we have a clear conception of the several stages of anesthesia and the rapidity with which a patient may pass from one stage into the other.

These several stages are usually designated as: 1, the stage of excitement; 2, the narcotic and anodyne stage; 3, complete anesthesia; 4, paralysis and death.

The acceleration of the circulation noticed in the first stage is similar to that produced by the ingestion of alcohol or alcoholic beverages, and the production of this stage was one of the uses to which ether was put long before it was used as an anesthetic in surgical operations. From this stage the patient usually passes quite gradually into the second or narcotic stage.

In the narcotic stage sensibility becomes impaired, but there is not infrequently a persistence of reflex action which manifests itself in a form of delirium or wild excitement. This is usually an indication of faulty anesthetization and is a complication that can be avoided in many instances by the more careful preparation of the patient for the anesthetic. In the majority of instances, however, the patient passes rapidly into the third stage, that of complete anesthesia.

This third stage differs from the second in that there is complete absence of reflex action, even of the conjunctiva, which is usually, though erroneously, advocated as the most satisfactory test for complete anesthesia. A satisfactory surgical anesthesia is indicated by complete relaxation of all of the muscles of the body, regular breathing, deep inspirations and a fully relaxed lower jaw. The widely prevailing though barbarous habit of touching the conjunctiva should never be resorted to.

V 19

By the careful administration of the anesthetic this stage of surgical anesthesia may be continued for a considerable period of time, but we must never forget that it is ever bordering on, and may at any moment pass into, the fourth or paralytic stage, when respiration ceases, the heart beats become feebler, and, unless vigorous and prompt restorative measures can be resorted to, may cease entirely.

The Administration of Ether.

While it has been asserted that the administration of anesthetics is an art that can not be taught or learned but must be acquired, it is also true that there are certain points or rules that have been sufficiently well established to warrant their being heeded, and the general conduct of anesthetization can best be illustrated, perhaps, by giving the method pursued by an ordinarily careful anesthetist.

The patient is made thoroughly comfortable, in a recumbent position, on a table or wheel stretcher, if in a hospital, with a pillow just sufficient to raise his head but slightly.

The mouth is freed from false teeth and other foreign materials, and the lips and nose are anointed with petrolatum to avoid the accompanying irritation from contact with the anesthetic.

A pad of moistened gauze is then placed over the eyes to avoid irritation by the fumes of the anesthetic.

All these several stages should be carefully explained to the patient so as to assure him that every possible precaution is being taken to provide for his comfort and well-being, and to gain his confidence, for the more important feature of administering the anesthetic itself.

After the patient has been prepared and his confidence gained by explanation of the several stages of the preparation, he is allowed to accustom himself somewhat gradually to the taste and smell of the ether. To accomplish this the cone or gauze containing the anesthetic is held some slight distance from his face, gradually brought closer as the patient becomes more and more accustomed to the inhalation. If the anesthetist has been successful in gaining the confidence of the patient he will find that the latter will pass through the preliminary stages of anesthesia without a struggle, and that complete relaxation will be secured with a minimum of the anesthetic.

When a patient has been completely anesthetized very little of the anesthetic will suffice to maintain the condition and the further efforts of the anesthetist can be devoted to observing the respiration and the surface reflexes of the patient in order to prevent his reverting to the second stage of anesthesia, or passing on into the much-to-be-dreaded stage of paralysis of the respiratory center.

With chloroform the passing from one stage of anesthesia to the next is much more rapid than with ether, less of the anesthetic is used, more air must be allowed, and there is, of course, a correspondingly smaller margin of safety in the stage of complete surgical anesthesia.

Since all of us can not become expert anesthetists and yet must at times perform that office, this advantage of ether is well worth consideration.

The greatest immediate danger from the inhalation of ether or chloroform, but more especially of the latter, is the administration of the vapor in too great concentration. One hundred volumes of air require approximately from three to four volumes of ether vapor, and 100 volumes of air require about one volume of the vapor of chloroform to induce anesthesia, but an increase of from two to three volumes in the concentration of the ether, or only one volume of chloroform to 200 of air will prove fatal in a short time.

While we do not actually measure the relative volumes of air and vapor, as a rule, these figures will serve to show the comparative danger of the two substances, for it is many times more difficult to avoid overstepping narrow boundaries than broad ones.

When a perfectly safe ratio is maintained the delay in inducing anesthesia often proves vexatious, and the anesthetist may be urged to expedite the operation by increasing the concentration, but he should never forget the grave responsibility which he has assumed and should never permit the impatience of others to induce him to exceed the limits of caution, save only in those grave emergencies where delay in operation may mean death to others who are awaiting their turn.

Official Anesthetics.

ÆTHYLIS CHLORIDUM.—U. S.—Ethyl chlorid occurs as a colorless, transparent, very volatile liquid, having a characteristic, rather agreeable odor and a burning taste. It is only slightly soluble in water, but is readily miscible with alcohol.

Ethyl chlorid is a haloid derivative, and is prepared by the action of hydrochloric acid gas on absolute ethyl alcohol. It is usually marketed in hermetically sealed glass tubes, and when liberated at ordinary room temperature volatilizes almost instantly. The resulting gas is very inflammable and the substance itself should never be used in proximity to an open flame or fire.

For local anesthesia the liquid in a fine spray is applied to the surface to be anesthetized.

The average amount necessary to induce general anesthesia is from 5 to 10 c.c. (75 to 100 minims).

ÆTHER.—U. S.—Ether is a transparent, colorless, volatile liquid having a characteristic odor and a pungent, sweetish taste. It should contain 96 per cent. by weight of absolute ether or ethyl oxid and about 4 per cent. of alcohol containing a little water.

The per cent. content of ethyl oxid or absolute ether in a given specimen is a matter of considerable importance when the substance is to be used for anesthesia. The official ether, when exposed to air, appears to absorb moisture, thus materially reducing the anesthetic value of the ether. The practice that has long been followed of sending out ether in hermetically sealed cans is an efficient safeguard against this absorption of moisture.

CHLOROFORMUM.—U. S.—Chloroform is a heavy, clear, colorless liquid having a characteristic ethereal odor and a burning, sweet taste. It should contain not less than 99 per cent. by weight of absolute chloroform and from 0.6 to 1 per cent. by weight of alcohol.

Chloroform when not pure is readily decomposed, forming chlorin compounds that may prove to be extremely dangerous to the patient. Even chloroform that corresponds to the requirements of the Pharmacopeia may be decomposed in the presence of damp air and heat, and the substance should, therefore, be carefully preserved in small, well-stoppered bottles.

The Army Medical Bill.—How much we have learned from our Oriental friends, says *Collier's Weekly*, will be indicated by the disposition of the Army Medical Bill, now before Congress, which might be described as a measure to make the United States Army fit to fight in time of war. If the Japanese triumph taught the military world anything, it was the importance of keeping soldiers healthy. That a sound man will fight better than a sick man, that an army in good physical condition will beat an army depleted by disease, seem truisms. Yet, until the little yellow men achieved their unbroken record of victories no military authority had ever given due weight to the hygienic problem. Our Army is now officered for a strength of 100,000 men, except the medical department, which is officered for a strength of less than 50,000 men. This bill seeks to increase the medical faculty to a strength sufficient to care for the health of the fighting men. In our late war with Spain the medical department lacked numbers, equipment and authority. The result was fourteen soldiers dead from disease (mostly preventable) to one from wounds. In the recent war in the Far East the Japanese lost one soldier from sickness to four from shell, bullet and bayonet. Their medical department was sufficient, and, in its own province, paramount. Only 5 per cent. of our forces escaped the hospital. In an equal length of time, and under more trying conditions, so reckons Dr. L. L. Seaman, in his recent book, but 15 per cent. of the Japanese army reported sick. Fighting strength depends not more on the number of soldiers on the roster than on the proportion able to bear arms when the time of action comes. Painful though it be to our national pride, the inference is inevitable, that with equal forces enlisted, a Japanese army with a hospital record of only 15 per cent. would defeat an American army with a hospital record of 95 per cent. An adequate medical force is as essential to an army as a skillful trainer to a pugilist.

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SATURDAY, JUNE 16, 1906.

To give our readers the complete proceedings of the House of Delegates and of the General Meetings at Boston, we omit some departments from this issue and curtail others.

THE SUCCESS OF THE BOSTON SESSION.

The Boston session of the American Medical Association was a remarkable success in every way. In numbers it exceeded any previous gathering of medical men anywhere, unless it be the Moscow International Medical Congress. Over four thousand seven hundred registered, exceeding by eighteen hundred the largest previous registration—that of Atlantic City in 1904. A large number of physicians were present who did not register, besides invited guests and associate members who are not included in the above figures. It is not an exaggeration to say that at least six thousand physicians were in attendance. An unusual number were accompanied by their wives and friends, so that one local newspaper's statement that fifteen thousand visitors were in Boston as a result of the American Medical Association session was probably true.

In spite of the unusually large attendance, the accommodations were most ample, and the fear that Boston could not take care of the Association was not realized. The hotel committee had done its work well. Good rooms in first-class boarding houses and hotels were still on the list when the last comer had been satisfactorily located.

The local Committee of Arrangements deserves the highest commendation for the magnificent manner in which the Association was entertained. Never before in the history of the organization have the plans for its care and entertainment been conceived and executed on such a grand scale and with such attention to the minutest detail. With it all there was not the slightest attempt at ostentatious display. Not a single offensive advertisement was to be seen, but throughout the entire meeting everything from the greatest to the least was carried out with precision and with that dignity and graciousness which are so characteristic of this famous city.

The scientific exhibits, the clinical exhibits, and the practical clinical demonstrations at the hospitals and elsewhere provided sufficient scientific entertainment to have well repaid attendance at the session, even had there been no section work—indeed, this elaborate clinical feast might have detracted from the section work had not the attendance been so phenomenally large. As it was, the overflow at some of the section meetings found ample opportunity to be both entertained and enlightened by these exhibits.

The session of 1906 will be a memorable one in the history of the organization on account of the perfect unity of feeling which developed throughout the entire profession and from all sections of the country. Never before has it been so apparent that the end and aims of the profession are not limited to personal and individual benefits nor to local conditions, but are coextensive in philanthropy and beneficence with the welfare of the entire community, and that when the great interests of the public are concerned all individual differences are at once lost in that altruism which so characterizes the true physician.

PHOTODYNAMIC ACTION.

H. von Tappeiner originated the term photodynamic action to designate the toxic effects exerted by fluorescent substances in the light. He first worked with certain chemical substances, the chinin derivatives, and showed that the toxic action was due to a definite nucleus in the molecule. Grethe and later Raab studied the marked toxic effect that certain fluorescent substances have on the paramecium; and Raab traced this to the action of light on these chemicals since in the dark they were quite ineffective. The sunlight does not affect non-fluorescent poisons in this way. The fluorescent substance must be in solution and in order to obtain the toxic effect the living cells must be immersed in the fluid as fluorescent light itself has no effect; further, light passing through one fluorescent solution has lost its power to cause a second solution to fluoresce. Photodynamic action and absorption of light are not identical, for it has been shown that many actively absorbing substances show no increased toxicity following the absorption.

The fluorescent substances include a large number of chemicals belonging to the anilins. As examples may be mentioned eosin, magdala red, erythrosin, fluorescein and acridin. All fluorescent substances exert some photodynamic action but they vary a great deal in their intensity. Weaker solutions are more active in proportion to their concentration than strong solutions, and the intensity of action also bears a direct relation to the intensity of the light. Both sunlight and artificial light are effective, the former being the more powerful.

The first work carried out by Raab, v. Tappeiner and others on the effect of fluorescent substances in light

was principally on infusoria. More recently, the effect of fluorescent fluids has been studied on many other substances, including such bodies as bacteria, toxins, antitoxins, ferments of various kinds, parasitic conditions of the skin and neoplasms.

Bacteria and fungi, as a rule, are susceptible to the photodynamic action of many fluorescent substances. Some ferments show a decided susceptibility to this action, others much less. Diastase, trypsin, invertin and chymosin are affected especially by eosin and magdala red, while other fluorescent bodies do not affect them. Katalase is not affected by any fluorescent body, so far tested.

Jodlbauer and v. Tappeiner discovered the interesting fact that in the presence of oxygen the photodynamic action on enzymes is very much stronger than in its absence. There is undoubtedly an important relation existing between oxidation and this action, but from the work already done it appears that they are not identical and not always parallel. Oxygen, however, seems to be an important condition for the development of this activity.

An interesting field is opened up by the work on bacterial and other toxins. Eosin and other anilins act injuriously on diphtheria and tetanus toxin, diphtheria and tetanus antitoxin, ricin and snake venoms. Guinea pigs, for instance, can be protected from one minimum lethal dose of diphtheria toxin by the injection of eosin with subsequent exposure to sunlight. The protective action is not great, however. The activity of the agglutinin of ricin and of the interesting bodies in snake venoms (neurotoxins, hemolysins, agglutinins) is more or less diminished by eosin and erythrosin in sunlight. In the dark no effect is noted. It has also been found that complements and precipitins are acted on by these fluorescent substances, but the immune body or amboceptor is not affected.

If one injects a fluorescent body such as eosin, under the skin of an animal and then exposes this part to the sunlight, a marked reaction occurs, which consists essentially in the formation of areas of necrosis and sloughing. v. Tappeiner and others have applied this observation to the treatment of superficial tumors, lupus and other skin lesions which are injected with eosin and exposed to sunlight or artificial light. This, apparently, has met with some success, but the data thus far obtained are hardly sufficient to draw any definite conclusions.

Summing up, we see that photodynamic action is a form of destructive activity which acts on various bodies much as do the usual chemical and physical agents. On the whole, substances which are highly resistant to the latter, also conduct themselves in a similar manner to this action, while the more labile bodies show a corresponding susceptibility. From a practical standpoint, it furnishes us with another means whereby the properties of various complex bodies may be studied and compared, and it may become of real value as a therapeutic agent in the field of phototherapy.

THE EMOTIONS AS FACTORS IN THE ETIOLOGY OF DISEASE.

Although the mechanism may not be clear, it is generally recognized that emotional states constitute a distinct and definite factor in the etiology of a number of morbid affections. This relation is observed more especially, though not exclusively, in connection with disorders involving the nervous system. Even apart from disease, various phenomena appear in the train of emotional influences. Among the more common of these are tremor or muscular twitching, vasomotor spasm (pallor) or paresis (blushing), cardiac inhibition (syncope) or release of normal cardiac inhibition (tachycardia, palpitation), horripilation, secretory disturbances (hyperidrosis, anidrosis, involuntary discharges). No definite and constant relation exists between the character of the emotional disturbance and the resulting manifestations. An interesting presentation of some effects of fright is contained in a communication read recently before the Bristol Medico-Chirurgical Society by Dr. J. R. Charles,[1] but many of the statements made therein are applicable also to other forms of emotion.

Emotional influences constitute one of the most important factors in the etiology of hysteria, with its protean manifestations, and not rarely they act as potent therapeutic factors. A similar causative relation has been observed also in some cases of exophthalmic goiter. Emotional perturbations, particularly fright, are included among the classic causes of chorea, and they have been noted as antecedent in some cases of paralysis agitans. Not rarely they are assigned as causes of the attacks of epilepsy. They may precipitate enuresis in a child previously continent and they may give rise to night terrors in an impressionable subject. Attacks of asthma and of migraine are said sometimes to be superinduced by emotional influences. Attacks of gout may be excited in a similar manner, and sugar may be made to appear in the urine as a result of profound mental strain. Depressing emotions appear to lower the bodily resistance and thus to facilitate, if not to invite, bacterial invasion, and the impression prevails that fear predisposes to infection in times of epidemic.

In what manner emotional influences operate under the conditions discussed must for the present remain a matter for speculation. It may be surmised in a general way, however, that they result in a disturbance of functional balance and merely precipitate conditions for the development of which the necessary factors are already present.

THE SURGICAL VALUE OF THE DIFFERENTIAL LEUCOCYTE COUNT.

Enumeration of the corpuscular elements of the blood, both red and colorless cells, is so well established a procedure as to require no special advocacy at the present time. It must be borne in mind, however, that the information acquired in this way will prove of greatest

1. Bristol Medico-Chirurgical Jour., March, 1906, p. 23.

value according as it is weighed in connection with the other clinical phenomena present. Alteration in the number of blood corpuscles is due to so many different causes that a careful study of all the signs and symptoms will often be necessary, and is always to be advised, in order to determine the particular cause in any given case. A determination of the relative number of the several varieties of leucocytes, besides, will often yield valuable information, sometimes even when the number of colorless corpuscles is not increased. Decisive as is at times the information thus gained in the diagnosis of affections ordinarily requiring only medicinal treatment, it may be of vital significance in the recognition and treatment of disorders requiring surgical intervention, and more especially with regard to the severity and prognosis. As the result of a careful and extended study of the subject Dr. Chas. Langdon Gibson[1] arrives at the opinion that the differential blood count and its relation to the total leucocytosis constitute the most valuable diagnostic and prognostic aid in acute surgical diseases furnished by any of the methods of blood examination. Its chief value consists in indicating the existence of suppuration or gangrene, the increase in the number of polynuclear cells under such circumstances being disproportionately great as compared to the leucocytosis. The normal number of leucocytes is placed at between 5,000 and 10,000 and the normal proportion of polynuclear cells at 75 per cent. An increase beyond these figures may be accepted as an indication of the presence of some morbid process in the body, but especial significance is to be attached to a disproportionate increase in the number of polynuclear cells. When the latter is present it will be found that the lesion is a severe one, or that absorption is active, or that both of these conditions prevail. In order to record graphically the varying degrees of disproportion between the two factors mentioned, and to make comparisons from day to day, Dr. Gibson has devised a chart in which the horizontal base line corresponds to 10,000 leucocytes on the one hand and 75 per cent. of polynuclear cells on the other hand. The greater the disproportion between the two will be the vertical distance between a point on the leucocyte level and another point on the polynuclear level. The greater this distance the more severe is the lesion, the less the bodily resistance to the infection present and the graver, therefore, the prognosis. We appear to have here not only a guide to diagnosis and in prognosis, but also an indication for or against surgical intervention.

1. Annals of Surgery, April, 1905, p. 485.

Medical News

CALIFORNIA.

Medical College Will Rebuild.—The College of Physicians and Surgeons, San Francisco, expects to have its new building open and ready for work by the beginning of the fall term.

Hospital at Gilroy to be Built.—In spite of the fact that Mr. Henry Miller is a heavy loser in the recent earthquake and fire, he will allow no change to be made in the plans for the Gilroy Hospital, which he is having erected at a cost of $100,000.

New Hospital.—The Angelus Hospital, Los Angeles, was formally opened for inspection May 14. The building represents an outlay of more than $200,000 and has incorporated in it the latest ideas in hospital construction. It is a four-story structure, and as nearly fireproof as possible.

Postgraduate School in Los Angeles.—The Los Angeles Postgraduate School has been organized and will be affiliated with the medical department of the University of Southern California. The officers of the institution are: Dr. Walter Lindley, president; Dr. Ernest W. Fleming, vice-president; Dr. W. W. Richardson, secretary, and Dr. John C. Ferbert, treasurer.

Commencement.—The Oakland College of Medicine and Surgery held its first graduating exercises June 1. A class of four was graduated, and the addresses of the evening were made by Mayor Mott of Oakland, and the Rev. Charles R. Brown, and the degrees were conferred by Dr. Frank L. Adams, president of the college.——Cooper Medical College held its annual commencement exercises May 9. Mr. Horace Davis and Dr. Charles N. Ellinwood delivered the addresses, and a class of 30 was graduated.

ILLINOIS.

Personal.—Dr. Philip F. Gillette, Elgin, has been appointed a member of the medical staff of the Illinois Hospital for the Incurable Insane, Bartonville.——Dr. W. T. Lynn of Shelby County celebrated his ninety-first birthday anniversary May 28.——Dr. Frank S. Whitman, superintendent of the Illinois Northern Hospital for the Insane, Elgin, has resigned, to take effect July 1.——Dr. Thomas W. Keys, Leroy, left for a three months' visit to Great Britain, June 2.

Chicago.

Deaths of the Week.—The total deaths from all causes for the week ended June 9 were 523, 58 more than those reported for the preceding week. This is equivalent to an annual death rate of 13.31 per 1,000. Pneumonia caused the greatest number of deaths, 77; consumption caused 45; nephritis and violence (including suicide), each 43; heart diseases, 42; cancer, 32; nervous diseases, 31, and acute intestinal diseases, 27.

Commencement.—The twenty-fourth annual commencement exercises of the College of Physicians and Surgeons, the College of Medicine of the University of Illinois, were held June 5, when degrees were conferred on a class of 226 by President Edward J. James, of the University of Illinois. The doctorate address was delivered by Dr. William E. Quine, dean of the college.

NEW YORK.

New York City.

Personal.—Dr. Albert M. Judd, Brooklyn, was caught between his own and another automobile on June 1 and severely bruised.

Quarantine Inspected.—The consulting board of health officers of the port of New York, after making a tour of inspection, reported very favorably on the administration of the service during the past year. The duties of the station were discharged with little interference with commerce or the welfare of passengers. The new buildings on Swinburne Island, which have been erected during the past year, were also inspected and approved.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended June 2, 931 cases of measles, with 38 deaths; 351 cases of tuberculosis, with 179 deaths; 347 cases of diphtheria, with 57 deaths; 192 cases of scarlet fever, with 18 deaths; 49 cases of whooping cough, with 6 deaths; 85 cases of varicella, with 1 death; 25 cases of typhoid fever, with 6 deaths, and 22 cases of cerebrospinal meningitis, with 17 deaths, making in all 2,012 cases, with 325 deaths.

Coroner Arraigns Hospital System.—At a meeting of superintendents of hospitals throughout the city on June 7, the subject of transferring patients from one hospital to another was discussed and the reasons set forth for the impracticability of Coroner Harburg's ordinance fixing a penalty of $100 in every case where a superintendent refuses admission to a sick person in an ambulance or orders the transfer of a patient who is dangerously ill. Under such an ordinance all hospitals would have to admit contagious diseases and insane patients, as well as those suffering from insomnia or old age. Dr. Armstrong of Bellevue refuted the accusations that moribund patients had been transferred to keep down the death rate of the hospital.

NORTH CAROLINA.

April Deaths.—During April 242 deaths were reported, equivalent to an annual death rate of 14.4 per 1,000. The principal causes of death were: Consumption, 36; pneumonia, 33; heart disease, 28; diarrheal diseases, 19, and violence (including suicide), 14.

Graduating Exercises.—At the graduating exercises of the North Carolina Medical College, Davidson, April 3, degrees were conferred on a class of 24. Dr. Benjamin K. Hays, Oxford, delivered the address.——The fourth annual commencement exercises of the University of North Carolina, Medical Department, were held at Chapel Hill, May 11. The address of the evening was delivered by Dr. Robert Lee Payne, Norfolk, Va., and a class of 11 received diplomas.

State Society Meeting.—The fifty-third annual meeting of the Medical Society of the State of North Carolina was held in Charlotte, May 29, 30 and 31. The meeting was called to order by Dr. Robert L. Gibbon, Charlotte, who introduced the new president, Dr. Edward C. Register, Charlotte. The welcome to the delegates was extended by Hon. C. T. Guthrie, and the response was made by Dr. Benjamin K. Hays, Oxford. The president, in his address, "Higher Standard Preliminary Education for Medical Students," made a strong appeal for better and higher standards for entrance into the ranks of the profession of the state, and pointed out where the state fell below the standard of other states in this particular. He urged strongly the better literary and practical training of students before entry to medical college. The chief topics of discussion during the meeting were the pure-food movement and the nostrum evil, and resolutions were adopted urging on the state representatives in congress the necessity of radical action on both subjects. On the evening of May 30 the society met with the State Board of Health and discussed matters pertaining to the health of the commonwealth. The following officers were elected: President, Stephen D. Booth, Oxford; vice-presidents, Drs. Charles M. Strong, Charlotte, John E. McLaughlin, Statesville, and William F. Hargrove, Kinston; secretary, Dr. David A. Stanton, High Point, and treasurer, H. McKee Tucker, Raleigh. Morehead City was chosen as the place for the next annual meeting.

PENNSYLVANIA.

Philadelphia.

Jefferson Commencement.—Jefferson Medical College celebrated its eighty-first annual commencement June 4. The class was composed of 213 men, and the diplomas were awarded by Hon. William Potter, president of the board of trustees. The total number of graduates is now 12,019.

Personal.—Dr. Richard Sharpless Davis was appointed resident physician to the Medico-Chirurgical Hospital.——Dr. and Mrs. George McClellan sailed for Europe June 16.——Dr. S. I. Eber, resident physician in Mount Sinai Hospital since its opening, was tendered a farewell reception June 3.

Health Report.—The total number of deaths reported for last week reached 496, an increase of 52 over the week previous and an increase of 74 over the number for the corresponding week of last year. The principal causes of death were: Typhoid fever, 24; measles, 3; pertussis, 9; diphtheria, 7; meningitis, 3; consumption, 57; cancer, 21; apoplexy, 21; heart disease, 41; acute respiratory disease, 50; gastritis, 7; enteritis, 26; Bright's disease, 40; suicide, 6; accidents, 23, and marasmus, 9. There were 282 cases of contagious disease reported, with 32 deaths, as compared with 309 cases and 39 deaths reported in the preceding week, and 189 new cases of typhoid fever were reported, as compared with 170 in the previous week.

VIRGINIA.

Commencements.—The University College of Medicine held its annual commencement exercises at Richmond, May 17. Dr. Stuart McGuire, president of the college, delivered the commencement address, after which the diplomas were awarded.——The faculty of the Medical College of Virginia, at its meeting, May 9, declared 45 students of the graduating class of that institution to be doctors of medicine.

Amalgamation of Medical Colleges.—Committees of the Medical College of Virginia and the University College of Medicine, Richmond, are at work with the view to consolidation of the two institutions. The propositions under consideration are that the two colleges should be consolidated under the name of the Medical College of Virginia, with Dr. Stuart McGuire as president of the consolidated colleges; that the corporation of the University College of Medicine cease to exist and its board of trustees be abolished; that the faculty of the present two colleges have equal representation in the faculty of the consolidated institution, and that the buildings of the Medical College of Virginia become the home of the amalgamated institution.

WASHINGTON.

Fever Closes College.—An epidemic of typhoid fever at Gonzaga College, Spokane, has caused the authorities of the institution to close the institution for six weeks.

State Board Appointed.—The governor has announced on May 24 the following appointments on the State Medical Board: Dr. Casper W. Sharples, Seattle, to succeed himself; Dr. H. A. Wright, Wilbur, to succeed himself, and Dr. Kenneth B. Turner, Seattle, to succeed Dr. Ellsworth E. Shaw, Walla Walla.

Damage Suits Won and Lost.—The Supreme Court decided against Dr. H. E. Ayers, Mohler, who appealed from the decision of the lower court in the damage suit brought by Thomas Froman, Spokane, in which a judgment for $5,000 was rendered against the appellant.——The suit of Roy Millis, Spokane, against Drs. Donald G. Russell, Henry B. Luhn and James B. Munly for $20,000 damages for alleged malpractice in the setting of a broken leg three years ago, was decided in favor of the defendants, April 17.

Personal.—Drs. Frank J. Vankirk and William D. Kirkpatrick, Bellingham, are spending the summer in Europe.——Dr. William B. McCreery, Tacoma, has been appointed physician of Pierce County, vice Dr. Thomas B. Curran, Tacoma, resigned.——Dr. Daniel M. Angus has resigned from the Prosser city council.—Dr. J. L. Lane, Redmond, has been made physician at the state penitentiary, Walla Walla, succeeding Dr. John C. Mack.——Drs. Ellsworth E. Shaw and Yancey C. Blalock, Walla Walla, have been appointed assistant surgeons for the Oregon Railway and Navigation Company.——Dr. William L. Ludlow, health officer of Seattle, has resigned, to take effect August 1.

WEST VIRGINIA.

Personal.—Dr. D. E. Stephan, traveling medical examiner for the Baltimore & Ohio, has been appointed medical examiner, with headquarters at Fairmont.——Dr. and Mrs. Frank L. Hupp, Wheeling, left for Europe June 10.——Dr. B. B. Wheeler, Clay, has been elected assistant physician of the McKendree Hospital, Fayetteville.

Ill and Injured.—Dr. Samuel E. Bailey, Parkersburg, who has been seriously ill with pneumonia, is now securely convalescent.——Dr. Joseph E. Robins, Claremont, was seriously injured in a collision between his buggy and a street car in Charleston, April 5. His companion, Dr. Timothy L. Barber, Charleston, had several ribs broken.——Dr. Emery W. Strickler, Shinnston, was thrown from his horse May 7 and sustained painful injuries.——Dr. Charles A. Barlow, Benwood, was kicked in the abdomen by a horse April 4, and seriously injured.

WISCONSIN.

Smallpox.—The village of Roscoe has been alarmed by the appearance of smallpox; 27 cases have been reported, and the village schools have been closed.——Five cases of smallpox are reported in one house in Madison.

Commencement Exercises.—The Milwaukee Medical College held its annual graduation exercises May 31, when a class of 30 received diplomas from the president, Dr. William H. Earles. The valedictory for the medical department was delivered by Dr. A. D. Hoyer.

Personal.—Dr. William M. Farr, Kenosha, has resigned as local surgeon for the Chicago & Northwestern Railway Company, and Dr. Herbert A. Robinson has been named as his successor.——Dr. Frederick S. Luhmann, Manitowoc, has been re-elected county physician of Manitowoc County.

The Value of a Stomach.—In the case of Robert Koerber against Dr. Arthur J. Patek, Milwaukee, in which the defendant demands $5,000 damages, claiming that the physician, after a postmortem examination of the plaintiff's mother, four years ago, carried away the stomach and refused to return it, the jury rendered a verdict awarding $833.45 to the plaintiff. Dr. Patek has appealed from the verdict.

GENERAL.

Gastroenterologists Elect.—At the ninth annual meeting of the American Gastroenterological Association, held in Boston, June 4 and 5, the following officers were elected for the ensuing year: President, Dr. Henry W. Bettmann, Cincinnati; vice-presidents, Drs. Julius Friedenwald, Baltimore, and Frank H. Murdock, Pittsburg, and secretary and treasurer, Dr. Charles D. Aaron, Detroit.

FOREIGN.

Measles in Mexico.—Measles has been epidemic for the last few months in Santa Rosalia, in the state of Chihuahua. The

children of the poorer classes are chiefly affected. Sequelæ are unusually frequent, bronchopneumonia oftener than anything else. In many cases the measles is followed by stomatitis, exhausting diarrheas, etc. The uncleanly habits of the peons, the class chiefly affected, are responsible for many of the complications.

Deaths

Charles Henry Alden, M.D. Pennsylvania Medical College, Philadelphia, 1858, brigadier general United States Army, retired, died at his home in Pasadena, Cal., June 9, aged 70. General Alden was born in Philadelphia, April 28, 1836, received his preliminary academic education at Brown University, Providence, graduating in 1856, and afterward received the degree of A.M. from that institution. He also received the honorary degree of Doctor of Medicine from the University of Pennsylvania in 1901. He entered the medical department of the Army as lieutenant and assistant surgeon in June, 1860; was made captain and assistant surgeon five years later; was breveted lieutenant-colonel March 13, 1865; was promoted to major and surgeon in 1866, to lieutenant-colonel and deputy surgeon general in 1888, and to colonel and assistant surgeon general in 1892. When General Sternberg became surgeon general in 1893, Colonel Alden, who was then chief surgeon of the department of Dakota, was ordered to Washington for duty as principal assistant in the office of the surgeon general, and retained this position until his retirement in April, 1900. He was the first president of the Army Medical School, Washington, and retained this position for several years. Just prior to his retirement Colonel Alden was tendered a dinner at the Raleigh Hotel by the medical officers stationed in and around Washington, to testify to the high esteem and affection in which he was held. Colonel Alden was retired in April, 1900, and four years later was made brigadier general, United States Army, retired. On his retirement he moved to Newtonville, Mass., and thence to Pasadena, where he died. He was a member for many years of the American Medical Association, a member and once president of the Association of Military Surgeons of the United States, a fellow of the New York Academy of Medicine, a member of the American Public Health Association, American Climatological Association, American Academy of Medicine, the Military Order of the Loyal Legion and the Order of Foreign Wars. General Alden was a man of charming personality, and a medical officer of distinguished ability, esteemed and beloved by his associates.

William Reginald Purvis, M.D. Jefferson Medical College, Philadelphia, 1886, of Alexandria, Va.; for many years health officer of that place, and at the time of his death coroner of Alexandria County, and one of the city physicians of Alexandria, died at the Alexandria Hospital, June 1, aged 45. The Alexandria Medical Society at a special meeting, June 2, passed suitable resolutions regarding the death of Dr. Purvis.

Peter L. Horne, M.D. Medical College of the State of South Carolina, Charleston, 1860; assistant surgeon in the Confederate service during the Civil War; once vice-president of the state medical society; and president of the Dorchester County Medical Association from the time of its organization, died at his home in St. George, S. C., April 21, aged 69.

Samuel Rush Sayers, Jr., M.D. University of Virginia, Medical Department, Charlottesville, 1900, of Wytheville, Va., a member of the Medical Society of Virginia, was found dead in his room in the Gault House, Chicago, May 29, aged 30. The coroner's jury found that he died from a gunshot wound inflicted with suicidal intent while despondent.

William Christie, M.D. Jefferson Medical College, Philadelphia, 1864; a member of the city council of St. John, N. B.; at one time president of the city medical society, and a member of the medical council, the executive of the provincial society, and a member of the hospital staff for 20 years, died at his home in St. John, February 8, aged 71.

Edgar Adolph Fischer, M.D. Long Island College Hospital, Brooklyn, N. Y., 1868; formerly of Watertown, S. D.; a member of the American Medical Association, and of the Baldwin County (Ala.) Medical Society, died at his home in Robertsdale, Ala., January 30, from meningitis, after an illness of three months, aged 64.

William C. J. Smith, M.D. College of Physicians and Surgeons in the City of New York, 1866, a veteran of the Civil War, and for many years a practitioner of Pottsville, Pa., but more recently a resident of St. Clair, died at the Pottsville Hospital, May 31, from cerebral hemorrhage, after a short illness, aged 68.

John Eugene Tremaine, M.D. Hahnemann Medical College and Hospital, Chicago, 1891, professor of materia medica in his alma mater, died at his home in Chicago, June 7, from septicemia attributable to infection received while attending an obstetric case, after an illness of two weeks, aged 37.

Thomas Henry Brinker, M.D. Jefferson Medical College, Philadelphia, 1846, one of the oldest practitioners of Westmoreland County, Pa., died at his home in Pleasant Unity, Pa., April 27, after an illness of ten days, from disease of the kidney and bladder, aged 87.

Alvin R. Bills, M.D. University Medical College of Kansas City, Mo., 1882; a member of the American Medical Association; for many years a practitioner of Bentonville, Ark., died at his home in Sulphur Springs, Ark., May 24, from asthma, aged 50.

James C. M. Rankin, M.D. Medical Department of the University of Nashville, Tenn., 1858, for four years in the Confederate service during the Civil War, died at his home in Bella Mina, Ala., February 18, aged 72.

William E. Morrison, M.D. Hospital Medical College, Louisville, 1884, for 20 years a prominent physician of Cumberland Gap, Tenn., died June 9, at his home in that place, from cerebral hemorrhage, aged 45.

Charles Wilson Lewis, M.D. Vanderbilt University, Medical Department, Nashville, Tenn., 1886, died at the home of his son in Birmingham, Ala., May 2, from heart disease, after an illness of two years, aged 67.

Clark B. Provins, M.D. Rush Medical College, Chicago, 1882, a specialist on diseases of the eye and ear, died at his home in Ottawa, Ill., June 4, from pernicious anemia, after an illness of three years.

Thomas B. Watkins, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1868, a Confederate veteran, died at his home in Memphis, Tenn., May 31, aged 65.

W. O. Williams, M.D. Medical College of Indiana, Indianapolis, 1890, died at his home in Indianapolis, March 30, from pneumonia, aged 38.

George E. Willard, M.D. Chicago Medical College, 1874, died at his home in Chicago, June 9, after an illness of seven years, aged 51.

A. M. Watson, M.D. University of Edinboro, Scotland, 1864, died at his home at Alberni, B. C., March 24.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending June 9, 1906:

Rand, I. W., Fuller, L. A. Skinner, George A., asst.-surgeons, ordered to report in person, June 25, 1906, to Lieut.-Col. George H. Torney, deputy surgeon general, president examining board, Army General Hospital, Presidio, San Francisco, Cal., for examination to determine their fitness for promotion.

Stone, John H., Wilson, James S., Fauntleroy, P. C., Dutcher, Basil H., Darnall, Carl R., asst.-surgeons, ordered to report in person, June 25 and 26, 1906, to Major William H. Arthur, surgeon, president examining board, Army Medical Museum Building, Washington, D. C., for examination to determine their fitness for promotion.

Hutton, Paul C., asst.-surgeon, granted ten days' leave of absence, with permission to apply for 21 days' extension.

Yost, John D., asst.-surgeon, relieved from duty at Honolulu, H. T., and ordered to proceed to Manila and report in person to the commanding general, Philippines Division, for duty.

Richard, Charles, surgeon, in addition to his other duties is announced as attending surgeon at Headquarters, Department of the East, Governor's Island, N. Y.

Hutton, Paul C., asst.-surgeon, leave of absence extended 21 days.

Sweazey, Verge E., asst.-surgeon, relieved from further treatment at the General Hospital, Washington Barracks, D. C., and ordered to Fort Williams, Me., for duty.

Duval, Douglas F., asst.-surgeon, relieved from duty at Fort Williams, Me., and ordered to Fort Snelling, Minn., for duty.

Grissinger, J. W., asst.-surgeon, left Fort Jay, N. Y., on leave of absence, to include July 1, 1906.

Appel, D. M., deputy surgeon general, reported for temporary duty in the office of the chief surgeon, Headquarters Department of California, San Francisco, Cal.

Ware, William H., dental surgeon, left Fort Wingate, N. M., and arrived at Fort Apache, Ariz., for duty.

Kelly, John P., contract surgeon, left Presidio of Monterey, Cal., for duty with troops in Sequoia National Park, Cal.

Thorp, Charles W., contract surgeon, left Fort Ethan Allen, Vt., on sick leave of absence for three months.

Burkhart, John L., contract surgeon, relieved from duty in the Philippines Division, and ordered to the United States on first transport after August 1.

Hess, John H., examining and supervising dental surgeon, granted leave of absence for two months.

Rhoades, Rex H., dental surgeon, ordered from San Francisco, Cal., to Fort Sheridan, Ill., for duty.

Rietz, Hugo C., dental surgeon, relieved from duty in the Department of the Lakes, and ordered to the Philippines Division for duty.

AMERICAN MEDICAL ASSOCIATION

PROCEEDINGS OF THE FIFTY-SEVENTH ANNUAL SESSION HELD AT BOSTON, JUNE, 5-8, 1906.

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OFFICIAL MINUTES—HOUSE OF DELEGATES

First Meeting—Monday, June 4

The House of Delegates convened in the Assembly Hall of the Boston Medical Library, and was called to order at 10:30 a. m. by the President, Dr. Lewis S. McMurtry, Louisville, Ky.

The report of the Committee on Credentials was read by the Chairman, Dr. W. B. Dorsett, St. Louis, Mo.

The President then delivered his Address.

President's Address.

READ AND REFERRED TO COMMITTEE (see page 1872).

To the Members of the House of Delegates of the American Medical Association:

Gentlemen:—On July 13, 1905, this House of Delegates adjourned in Portland, Oregon, to convene this day in Boston. From the beautiful city within sight of Mount Hood to the historic city of Boston is a transition which well typifies the broad scope and truly national character of the American Medical Association.

I see before me many delegates who participated in our work at Portland, and also a goodly number who are entering on the duties of this House for the first time. To all I extend a cordial greeting.

The second annual session of the American Medical Association was held in Boston in 1849. Sixteen years later, in 1865, at the close of the great civil war, the Association convened in this city for the second time; so that the present meeting marks the third convention of the Association here. We have come on the cordial invitation of the Massachusetts Medical Society, and we doubt not that the meeting will strengthen the bonds of sympathy and fraternity between the profession of the other states and our brethren in New England.

I would suggest that this House of Delegates extend to our hosts, the members of the Massachusetts Medical Society, a cordial invitation to attend the various proceedings of the Association and to take part in the same.

This session is made marked and memorable by the return to the Association of a full representation of the united profession of the great state of New York. After many years of disagreement and separation, all differences have been adjusted with mutual respect and honor, and the national association once more claims for its own the society by which it was founded and fostered. And the crowning triumph of this achievement is that the reunion of our New York brethren has been accomplished with perfect harmony and unanimity. Time and progress have removed every vestige of former disagreement, and the members of the profession of the Empire State have exhibited a noble spirit of moderation and consideration with one another. Some of the leaders in this great achievement are sitting in this House as delegates. All

honor to them. I know that I voice the sentiment of the profession of the constituent societies of this House when I extend to the delegates from New York a welcome, a most cordial welcome, to the fellowship of this Association.

During the year which has elapsed since I became President of the Association, I have had ample opportunity to become familiar with the work of the Association as it is conducted in the several directions you have authorized and ordered. Last year my distinguished predecessor in this chair, Dr. Musser of Philadelphia, mentioned in his address the fact that the President of the Association represents in our organization the great body of the profession as separate and distinct from the organization composed of officials whose tenure of office extends over several years. Such a relation imposes on your President the duty of reporting to you his impressions of the organization, with such suggestions as he may believe will be useful, and conducive to the better accomplishment of the great and noble purposes to which this Association is dedicated, and which are set forth in Article 2 of our Constitution.

Following this suggestion, it is a pleasing duty for me to bear testimony to the fidelity, honor and devotion of those officials who compose the established organization of this Association.

During my term of office I have been in constant official relations with the Secretary-Editor, and I would be remiss in my duty did I not publicly attest his ability, his conscientious devotion to his duty, his entire self-effacement in the discharge of his onerous, exacting and often disagreeable duties. I know whereof I speak when I say that, week in and week out, while we go our way in pursuit of our daily duties, he is laboring unselfishly to carry out the purposes of this House of Delegates, to elevate our profession on a higher plane of scientific achievement and professional advancement. Under the direction of the Board of Trustees, and with the resources provided by the Association, he has made THE JOURNAL the foremost medical weekly periodical in the world; and, as chairman of one of your most important committees, he is doing work of transcendent importance to scientific medicine and the welfare of humanity. These words of commendation are spoken as a duty I owe to the Association and must not be construed as a tribute of friendship or the commonplace eulogium of public occasion.

In the same spirit, I desire to bear testimony to the faithful work of the Board of Trustees. No more honorable men have ever discharged a high public duty and trust than those who have hitherto and who now compose that board. Their responsibilities are great, and with altruistic motives they have discharged their duties faithfully and without thought of self-interest.

From my intercourse with the members of our profession in the various states, as also from my correspondence during the year of my Presidency, it is apparent that the impression is very general that the President and Secretary are the chief and most authoritative officials of this Association. Permit me to call your attention to the fact that the combined powers vested in the President, Vice-Presidents, Secretary, the Judicial Council, and all committees, are trivial in comparison with the power concentrated in the Board of Trustees. Under our organization, the Board of Trustees has sole charge of the extensive property and controls all the financial and business affairs of the Association. This Board also has sole control of the disbursement of all funds in carrying on the publications of the Association—to supply funds for standing committees, to direct scientific investigations—and can mould the policy of the Association at will during the interim of the annual sessions. The present prosperous condition of the financial affairs of the Association, the splendid position and high standard of THE JOURNAL, and the efficiency with which the work of the several standing committees is being prosecuted, all compose a superb tribute to the ability, good judgment and professional devotion of the present Board. Indeed, the profession is honored by their service, and they deserve the grateful appreciation of the members of the medical profession.

In view of the fact that the Association's membership is increasing with great rapidity, and that its property interests and financial resources are also rapidly growing, it is of the highest importance that the efficiency of a board entrusted with such vital interests should be properly safe-guarded by careful selection of its members. Under our Constitution, three trustees are elected annually, each to serve for three years. It is inimical to a deliberate and discriminating choice to elect these responsible officers as is habitually done by the House of Delegates. I allude to the custom of voting on three names at once. When you consider that these officers are vested with more power and responsibility than are placed in all the other officers, certainly they deserve to be carefully chosen, one at a time, as obtains in the selection of the other officers. While the Constitution and By-laws make no specific direction as to the method of balloting, but prescribe the same course for the election of all officers (except that the Treasurer is to be nominated by the Board of Trustees), it is apparent that the intention is that the three trustees are to be elected by the same method of nomination and balloting as are the four Vice-Presidents. I would respectfully recommend that a motion be adopted which will guarantee a free and deliberate choice in the selection of these most important officers, by electing one at a time.

In Article 5, Section 1 of the Constitution it is prescribed that "the trustees shall be members of the House of Delegates, without the right to vote." This is eminently proper, and is intended to afford the trustees opportunity to give the House of Delegates information on all matters arising in the course of the proceedings over which the Board of Trustees has control and especial cognizance. That it would be an abuse of office, fraught with danger, to invest officers of such supreme power with the delegate's ballot was apparent when the Constitution was framed and adopted. Therefore, no member of the Board of Trustees should be eligible to membership in the House of Delegates, since such a delegate would be a trustee with the right to vote, a condition expressly forbidden in the Constitution. He would become a voter in the House before which his own name and the names of his colleagues of the Board of Trustees are to be submitted in competing ballot.

The Constitution, Article 9, Section 3, declares: "No member of the House of Delegates shall be eligible to the office of President or Vice-President." Such a protection of the interests of the Association against undue influence is so just, and the precaution is so necessary, that it needs no comment for proper appreciation. If such doubling of office in one individual is forbidden by the Constitution as to the President and Vice-President, how much more essential is it that the same precaution should be prescribed and enforced as to the trustees, whose power and responsibilities are so much greater? I shall have occasion presently to allude to the attacks now being made on the Association's JOURNAL and the Association's management. These attacks, which you will readily recognize as the result of sinister motives and altogether unjustified in fact, are directed toward work entirely within the control and direction of the Board of Trustees. As the strength and influence of the Association grows, and pressing evils are exposed and corrected, such attacks will naturally increase. Under such circumstances, the Board of Trustees should command the confidence of the profession at large, all members of the board should sustain the same relation to this House of Delegates, which selects them, and they should also be on the same footing with each other. Hence, I would recommend that the Constitution be so amended that no member of the board can occupy the double office of trustee and delegate.

So long as the meetings of the American Medical Association consisted almost wholly of section work, with a large general session every day for the adoption of resolutions, with no systematic or persistent work along definite lines, the commendation of the medical press was generally and freely bestowed on the organization. But since the reorganization, when this House of Delegates was established, and the membership has increased, and the power of a great organization comes to be intelligently directed toward improving the resources of scientific medicine and advancing the welfare of the

profession by organization, certain interests have been interfered with, and the natural course of misrepresentation and abuse has been resorted to by the interests involved. First, and most naturally, THE JOURNAL, owned and controlled by the Association and ably edited and published under the direction of the Board of Trustees, was the object of attack and misrepresentation. For years publishing firms have grown rich by the patronage of the medical profession, and these same firms owned medical journals liberally supported by the profession. That the medical profession should own and publish a journal of its own, and that this journal should attain great popularity and influence, has provoked hostile criticism and misrepresentation. That this hostility, abuse and misrepresentation should be directed against the editor of THE JOURNAL is natural, since he is in the direct line of fire, and, from one standpoint, is the chief offender. That you may appreciate the ridiculous character of these charges, I would refer you to the leading editorial in the last issue but one of a New York weekly, which has for years enjoyed the liberal patronage of the profession, and which is owned by a wealthy publisher of medical books. The editorial is entitled, "The American Medical Directory." After stating that the issuance of a medical directory by the American Medical Association is absolutely without excuse, although mentioning that the Medical Society of the State of New York had advantageously issued a directory of that state, the editor says:

"The Editor-Secretary has also gone into the business of publishing medical books—he might as well drag the Association into the making of shoes. We do not know who authorized this venture—perhaps the managers will take us into their confidence at the Boston meeting in June—but, whether authorized or not, if the Association publishes books it should give them without price to its members."* Comment on this is unnecessary. The allusion to Dr. Simmons and the feigned ignorance of the fact that the publication of a medical directory was authorized by a vote of this House of Delegates at Portland last year, shows the unfair methods and animus of the editor who wrote the lines quoted.

But there is another interest which has been offended and which is equally unfair and far more abusive in its attacks on THE JOURNAL and the Association. This is the interest of the manufacturers of "patent" and proprietary medicines. This House of Delegates established a Council on Pharmacy and Chemistry, which, with the co-operation of the Board of Trustees, has secured the services of expert chemists and pharmacists to analyze the various nostrums and proprietary medicines in popular use. Many remedies, widely advertised under a plausible name, were found to be composed of cheap and familiar drugs, and sold at a ridiculously high price. The Board of Trustees, by direction of this House of Delegates, excluded from the advertising pages of THE JOURNAL all preparations which did not make public with the advertisement the formula showing accurately the composition of the products advertised. Many of these manufacturers of proprietary medicines have grown rich and they saw here a serious menace to their interests. Their avenue of assault is through the editorial columns of the medical journals they have subsidized, and their press committee has been very active of late. Here, as in the instance I have cited from the medical publishers, the editor of THE JOURNAL is made the special object of abuse and criticism. In the meantime, the editor's unpardonable offense is that he is doing his duty faithfully, as he is appointed to do, and at all times under the direction of this House of Delegates.

The far-reaching labors of the chairman of your committee on organization, Dr. J. N. McCormack, which have done so much to build up this great organization, have likewise brought on that distinguished physician a goodly share of unjust criticism and abuse.

These attacks on the Association, its work and its officers, abound with allusions to "clique" and "ring" in the organization, which "clique" or "ring" is alleged to be surreptitiously and treacherously running the affairs of the Association. I know not to whom these epithets are intended to apply, but this I do know, that there is no officer or board, or committee of the Association which is not directly created by this House of Delegates. Hence, if there be a clique or ring entrenched in power anywhere in this great organization, the responsibility for its existence rests on this House of Delegates and the means for its immediate destruction are in your hands. You represent a constituency of more than 60,000 physicians, and it devolves on you to discharge faithfully the trust you have assumed.

Craving your pardon for detaining you so long, and bespeaking your indulgence and co-operation in the work before us, I now declare the House of Delegates open for the transaction of business.

*I would state that the weekly New York journal quoted here is not the New York Medical Journal, edited by that veteran medical editor and scholar, Dr. Frank P. Foster.

On motion of Dr. Frank Billings, Chicago, the Address was referred to the Reference Committee on Reports of Officers.

Method of Election of Trustees.

AMENDMENT REFERRED TO COMMITTEE.

In harmony with the suggestions contained in the President's Address, Dr. E. Eliot Harris, New York, offered the following resolution, which was likewise referred to the Reference Committee on Reports of Officers:

Resolved, That the Trustees of the American Medical Association be nominated orally and elected by ballot of the House of Delegates in separate order.

Reference Committees Announced.

The President then announced the reference committees:

COMMITTEE ON REAPPORTIONMENT.

President and Secretary (*ex-officio*).
G. W. Guthrie, Pennsylvania. F. D. Bain, Ohio.
W. J. Miller, Tennessee.

COMMITTEE ON CREDENTIALS.

W. B. Dorsett, Missouri, Chairman.
W. R. Townsend, New York. H. Bert Ellis, California.
Thomas McDavitt, Minnesota. J. H. Hamilton, South Carolina.

COMMITTEE ON AMENDMENTS TO CONSTITUTION AND BY-LAWS.

Alexander R. Craig, Pennsylvania, Chairman.
H. Bert Ellis, California. D. C. Brockman, Iowa.
William N. Wishard, Indiana. C. E. Cantrell, Texas.

REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS.

E. Eliot Harris, New York, Chairman.
W. D. Haggard, Tennessee. R. C. Moore, Nebraska.
Frank Paschal, Texas. A. D. Price, Kentucky.

COMMITTEE ON REPORTS OF OFFICERS.

Philip Mills Jones, California, Chairman.
Donald Campbell, Montana. A. Jacobi, New York.
Edwin Walker, Indiana. A. F. Jonas, Nebraska.

COMMITTEE ON MEDICAL LEGISLATION AND POLITICAL ACTION.

The Standing Committees, members (*ex-officio*).
J. F. Percy, Illinois, Chairman.
W. T. Sarles, Wisconsin. W. E. Anderson, Virginia.
J. R. Kean, United States Army. Hiram Burton, Delaware.

COMMITTEE ON MEDICAL EDUCATION.

Stuart McGuire, Virginia, Chairman.
John T. Rogers, Minnesota. J. N. MacCormack, Kentucky.
Henry L. Elsner, New York. L. C. Morris, Alabama.

COMMITTEE ON SECTIONS AND SECTION WORK.

C. L. Bonifield, Ohio, Chairman.
Charles Chassaignac, Louisiana. Jos. McFarland, Pennsylvania.
G. B. Ross, Vermont. H. W. Dewey, Washington.

COMMITTEE ON RULES AND ORDERS.

J. Garland Sherrill, Kentucky, Chairman.
Edwin M. Fuller, Maine. H. M. Workman, Minnesota.
D. T. Coleman, Georgia. L. D. Wilson, West Virginia.

COMMITTEE ON HYGIENE AND PUBLIC HEALTH.

Reginald H. Fitz, Massachusetts, Chairman.
H. F. Harris, Georgia. L. M. Halsey, New Jersey.
George W. Webster, Illinois. John T. Wilson, Texas.

Report of the General Secretary.

READ AND REFERRED TO COMMITTEE.

The Secretary read his report, which was referred to the Reference Committee on Reports of Officers (see page 1873), and that portion of it relating to the Constitution and By-Laws was referred to the Reference Committee on Constitution and By-Laws (see page 1871).

MEMBERSHIP.

To the Members of the House of Delegates:

Gentlemen:—The membership on the date of the Secretary's last report, June 1, 1905, was 19,285. From June 1, 1905, to May 1, 1906, 5,559 were added to the list of members, and 1,208 were dropped from the list, making a net gain for the 11

months of 4,351, or a total membership on May 1, 1906, of 23,636. The discontinuances were: 171 from death, 153 not eligible, 226 for non-payment of dues, 619 resigned, and 38 not found; total, 1,208. Of the 5,559 added to the list, 1,802 were new members, joining the Association direct, while 3,757 had been subscribers to THE JOURNAL and were transferred from the subscription list to the membership list. (On May 1, 1906, there were approximately 18,700 subscribers to THE JOURNAL not members of the Association.)

AMALGAMATED CONSTITUENT ASSOCIATIONS.

Since the last session of the Association two changes have occurred among the constituent state associations. All the legal details for the amalgamation of the New York State Medical Association with the Medical Society of the State of New York under the name of the Medical Society of the State of New York were completed last October and the consolidation was officially recognized by Dr. Lewis S. McMurtry, President of the American Medical Association, December 22.

We have been unofficially informed that on May 8, 1906, a joint meeting of the Oklahoma State Medical Association and the Indian Territory Medical Association was held at Oklahoma City, Oklahoma, at which it was voted to unite the two organizations under the name of the Oklahoma State Medical Association. Dr. B. F. Fortner of Vinita, Indian Territory, was elected as President, with Dr. E. O. Barker, of Guthrie, Oklahoma, as Secretary.

SECTION ON TROPICAL MEDICINE.

The following letter was received May 5, 1906:

DEPARTMENT OF THE INTERIOR, BUREAU OF HEALTH,
MANILA, March 30, 1906.

Dr. George H. Simmons, General Secretary, American Medical Association:

Sir:—By direction of the Committee on Public Policy and Legislation of the Philippine Islands Medical Association, I have the honor to recommend through you that the American Medical Association establish at its next annual meeting, a permanent section on Tropical Medicine. This movement will be gratifying not only to the Philippine Islands, but to Porto Rico, Hawaii and Panama as well. Very respectfully,

R. E. L. NEWBERNE,
Ex-officio, Sec., Committee on Public Policy and Legislation Philippine Islands Medical Association.

AMERICAN PHARMACEUTICAL ASSOCIATION.

A letter received from the General Secretary of the American Pharmaceutical Association, Mr. Charles Caspari, Jr., dated "Baltimore, May 14, 1906," says:

I have the honor of informing you that President Lemberger has appointed the following gentlemen delegates to attend the next annual meeting of the American Medical Association, to be held at Boston in June, for the purpose of extending cordial fraternal greetings from the American Pharmaceutical Association, and especially to attend the sessions of the Section on Pharmacology and Therapeutics:

Henry P. Hynson, chairman; John F. Hancock; Thomas P. Cook; Henry Kraemer; S. A. D. Sheppard; Charles Caspari, Jr.; C. S. N. Hallberg; E. L. Patch; Chas. F. Nixon; E. H. LaPierre; James H. Beal; S. P. Sadtler

ASSOCIATE MEMBERS.

I respectfully suggest that Section 5 of Chapter III of Book I of the By-Laws be made more definite. This year there have been certain misunderstandings in regard to the admission to the Official Program of "associate" members.

In 1901 a provision was made by which section officers could invite to take part in the scientific work those who were working in the allied sciences and who were not eligible to membership in the American Medical Association. The provision made in 1901 was as indefinite as the present by-law. I beg to quote from the minutes of the meeting of the House of Delegates, held June 11, 1902:

Dr. Victor C. Vaughan, a member of the Committee on Sections and Section Work, asked for an interpretation of Section 5 of the Constitution as to associate members, which reads as follows:

"Representative teachers and students of the allied sciences, not physicians, may become associate members by vote of the House of Delegates."

He said a gentleman, a distinguished physiologist, who is not a member of the Association, is to read a paper before one of the sections this afternoon, and he wanted to know whether the committee was barred from electing such men as associate members. He asked an interpretation of the two words, "not physicians," and suggested that such men be designated as "unregistered or unlicensed practitioners." If this were done, some of the best men, who were doing good scientific work, could be elected associate members.

Dr. John B. Roberts moved that the words suggested by the committee be incorporated and the committee so instructed. Carried.

As a result the section was modified to read as follows:

Section 7. Associate Members.—Representative teachers and students of the allied sciences, not registered or licensed physicians, may become Associate Members by the vote of the House of Delegates.

Section 3, Article II, of the Constitution, adopted in 1903, provided for "members by invitation" as follows:

Members by Invitation.—Members by invitation shall consist of distinguished physicians of foreign countries who may be invited by the officers of Sections or of the Association. They shall hold their connection with this Association until the close of the annual session to which they are invited, and shall be entitled to participate in all of its affairs, as in the case of members, but they shall not be assessed the annual dues.

The committee appointed by the House of Delegates in 1904 for codifying the Constitution and By-laws, combined these two sections—"Members by Invitation" and "Associate Members"—in one section, transferred it from the Constitution to the By-laws, and it is now Section 5, Chapter III, Book 1, as follows:

Associate Members.—Representative teachers and students of the allied sciences, and distinguished physicians of foreign countries, may be invited by the general officers or by the officers of a section, to attend the annual session and to take part in the scientific work. They shall be designated associate members. They shall hold their connection with this Association until the close of the annual session to which they are invited and shall be entitled to participate in the scientific and social functions of the Association.

I at first took it for granted that the same general principles were intended to be incorporated in this section as was indicated by the action of the House of Delegates on previous occasions, namely, that the provision was made to admit those who are not eligible to come in as regular members. The opposite view was taken by some, i. e., that teachers who were not in active practice, even though they had been licensed to practice and were members of their constituent state association, were eligible to come in as "associate" members.

My understanding is that originally it was intended that those once elected to "associate" membership should be continued as such members, but in the section adopted in 1904, quoted above, it is stated that "they shall hold their connection with this Association until the close of the annual session to which they are invited," carrying the idea that they are "associate" members only for that meeting. The trouble comes from the fact that the two sections above quoted were combined, and this provision just quoted, while it originally referred to "members by invitation" is made to apply to "associate" members also.

I would respectfully suggest that the matter be given consideration and the by-law made sufficiently definite as to both of these points to avoid any misunderstanding hereafter.

ALTERNATE DELEGATES FOR SECTIONS.

I respectfully suggest that provision be made for the appointment of an alternate from a Section to the House of Delegates when the duly elected delegate is not able to be present to represent the Section. No provision is made for such a contingency. The present provision is as follows, and is from Section 2, Chapter XII, devoted to "Sections": "Each Section shall also elect annually one representative to the House of Delegates of the American Medical Association to serve one year." There is no provision for the appointment of a delegate when the one elected can not serve.

DELEGATES FROM GOVERNMENT SERVICE.

Section 1, Chapter IV, Book II, of the By-laws specifies that no one shall serve as a member of the House of Delegates who has not been a member of the American Medical Association for at least two years. Surgeon-General P. M. Rixey, of the United States Navy, has called attention to the fact that in appointing a representative from the Navy to the House of Delegates his choice is greatly limited, as only medical officers who happen at the time to be stationed near the place of meeting are available. It sometimes happens that these surgeons have only recently become members of the American Medical Association. This also applies to medical officers of the Army and of the United States Public Health and Marine-Hospital Service. I would, therefore, suggest the advisability of adding to Section 1, Chapter IV, Book II of the By-laws the following: "Provided that this shall not apply to delegates appointed to represent the medical departments

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of the United States Army, of the United States Navy or of the United States Public Health and Marine-Hospital Service."

SYSTEM OF REPORTING.

In my report for last year the advisability of establishing a system of reporting for county and state secretaries was suggested, which suggestion met the approval of the House of Delegates. Accordingly, a system of report blanks was devised, after consultation with the various state secretaries. Of these a sufficient number was printed to supply all state secretaries desiring them. These blanks consisted of a card for the use of county secretaries in reporting changes and additions to the membership of county societies to the state secretary, and a large blank form for the use of secretaries of constituent state associations in making monthly reports to the office of the General Secretary. They were readily adopted by 43 state associations, or all except Alabama, District of Columbia, Florida, Maine, Mississippi, New Hampshire, Tennessee, Virginia and Wyoming. Monthly or quarterly reports are made, whereby the card index of members of the constituent state associations is kept corrected up to date. This index now consists of approximately 60,000 names entered alphabetically by state and county societies, and furnishes information regarding the membership of any individual physician in his constituent association.

THE COUNCILOR'S BULLETIN.

The advisability of establishing a Bulletin for the consideration of organization matters was also recommended in the report for last year and was approved by the House of Delegates at the Portland session. Accordingly the publication of such a bulletin was begun last fall, and numbers were issued in November, January, March and May. It has been sent to all county secretaries, officers of constituted state associations, including the Councilors, members of the House of Delegates, members of the Board of Trustees, officers of the Sections, etc., in short, to all persons interested in the work along the line of medical organization. The reception which the Bulletin has received has been most gratifying and the matter contained has been of interest and value to organization workers.

BIOGRAPHICAL CARD INDEX.

The establishment and maintenance of a biographical card index of the physicians of the United States was also recommended and approved last year. The work of collecting and arranging biographical matter for such an index was begun immediately after the Portland session, the plan being to accumulate all information possible regarding members of the profession, preserving it in permanent form and using such portions of it as might be required for the American Medical Directory. Beside sending out large quantities of personal information blanks to the profession throughout the country, data have been obtained from state licensing boards, medical colleges, as well as from secretaries of state societies. There are at present on file between 50,000 and 60,000 biographical blanks, filled out by the physicians themselves, containing full biographical data. These blanks are arranged alphabetically, so that they are readily accessible. The work is being carried on and in a short time the Association will have practically complete biographical data regarding every member of the profession and, as time goes on, this accumulation of material will become of immense value in obtaining any information regarding the personnel of the profession.

Respectfully submitted,

GEORGE H. SIMMONS, *General Secretary.*

Report of Board of Trustees Distributed.

The President then called for the report of the Board of Trustees.

The Chairman of the Board, Dr. T. J. Happel, suggested that a copy of the report be distributed to each member of the House of Delegates, without being read, and that a time be set Monday afternoon or Tuesday morning for its consideration.

Dr. E. D. Ferguson, Troy, N. Y., moved that the report be referred to the Committee on Reports of Officers without being read and that Tuesday at 2 p. m., be set for its consideration. Seconded.

Dr. Frank Billings moved as an amendment that the report be made the first order of business Monday afternoon. Seconded (see page 1861).

The original motion as amended was accepted and carried.

Report of the Council on Medical Education.

READ AND REFERRED TO COMMITTEE (see page 1875).

Dr. Arthur D. Bevan, Chicago, Chairman, presented the report of the Council on Medical Education.

Mr. President and Members of the House of Delegates:—The Council on Medical Education desires to call your attention to the report of the work of the Council as given at our second annual conference, May 12, 1906, copies of which have been handed you. This report is as follows:

The purpose of the Council during the last year has been and shall continue to be until accomplished the securing of the general adoption of the standards now recommended.

In order to obtain the general adoption of these basic principles the co-operation of the state licensing boards and the state medical societies must be secured. It has been gratifying to note the very general approval of these basic principles by these bodies, and it is believed that within two years the standard which we recommended as a result of the last conference will be practically universally adopted.

The work of the Council during the last year has been devoted to obtaining data of the existing state of facts in regard to medical education under the following heads:

First, the medical laws of the states and territories and foreign countries; second, the standing of medical schools, as shown by the results of examinations before the various state boards; third, the work of the state boards; fourth, the character of the medical schools, their courses, equipment, facilities, etc.

There can be no doubt but that the most important function of the Council of Education will be the careful collecting of all the facts on medical education and giving publicity to these facts, so that the state licensing bodies, the state medical societies and the medical colleges may be given an accurate presentation of existing conditions. Such publicity is bound to lead to correction and improvement. As an example, let us review briefly the work of the state licensing boards, and the standing of the medical colleges in this country, as determined by the percentage of their graduates passing such examinations.

We have divided the schools of the country into four classes, according to the percentage of failures before the different state boards. Table 1 gives the percentage of failures from 0 to 10; Table 2, the percentage of failures from 10 to 20; Table 3, the percentage of failures over 20 per cent.

In addition to that, we have an unclassified list in Table 4, in which are placed the schools which have not enough data upon which to warrant their being classified. For instance, schools with less than ten students applying for examinations and schools where students have applied simply for examination in one state. I think it is rather interesting to note that the schools which we might expect would be in the first class are largely in the first class, with such a school as Harvard leading the list with the smallest number of failures. In Class 2 the failures are from 10 to 20 per cent. There are a number of good schools in Class 2. I am rather inclined to believe that by directing the attention of the faculties of these schools to the fact that they are in Table 2, it will surely be of value to the schools themselves and will, I think, lead to improvement. I know from my own personal experience that by having our attention called to the number of candidates rejected during this year has placed the faculty with which I am connected upon its mettle. They all feel that it must be within their power to pay more careful attention to the final examinations to prevent the graduation of those students who later fail before state boards.

In Class 3 we will find some thirty-eight schools, with a percentage of failures of more than 20 per cent. It is evident from a study of the medical schools in this country and their work that there are five specially rotten spots which are responsible for most of the bad medical instruction. They are Illinois, Missouri, Maryland, Kentucky and Tennessee. In Table 3 this fact is very well shown. Beginning, for example, with these five states, you will find in Illinois a group of colleges, with 36.8 per cent., 21.5 per cent., and 30 per cent. of failures. You find in Kentucky, for instance, a group of five colleges, with

44 per cent., 30 per cent., 25 per cent., 37 per cent. and 25 per cent. of failures. You find in Maryland a group of five colleges with 24 per cent., 69.2 per cent., 26.2 per cent., 22.7 per cent., and 29.5 per cent. of failures.

You find in Missouri in a group of five colleges the following percentage of failures: 48.4 per cent., 52.4 per cent., 60 per cent., 25 per cent., 30.8 per cent.

Lastly, you find in Tennessee a group of six colleges the percentages of failures 60 per cent., 41.8 per cent., 30.4 per cent., 36.7 per cent., 51.4 per cent., and 34.1 per cent.

The principal cause for this bad work is found in the existence of medical schools which are conducted for profit. At our last conference we called attention to the fact that the time had arrived when a medical school could not be properly conducted from the fees of students and pay a profit to its faculty as a business investment. If we are to raise the standard of medical education in this country to a point where it ranks with the other great countries of the world, the medical school for profit must cease to exist.

Tables 5 and 6, which are also taken from the large tables published in THE JOURNAL of the American Medical Association, May 6, 1905, show comparatively: (1) the severity of examinations conducted by the various state examining boards and (2) the apparent leniency shown to colleges of the home state as compared with colleges of other states.

In these tables we find evidence that is of interest and may prove to be of service to the state boards themselves. The general proposition is that the percentage of rejections by state boards varies from 76 per cent. to 0 per cent. These tables, however, have but a comparative value. In making comparisons a number of other points must be considered. Some states (New York, for example) scrutinize the credentials of and reject many candidates before they come to the examination, thereby reducing the percentage of rejections by examination. States allowing non-graduates to come up for examination would have and should have a large percentage of failures. Colorado leads the list with 70 per cent. of rejections. However, in this state there were only thirteen men who submitted to a written examination, most of the applicants being granted license after a careful inspection of their credentials. The candidates whose credentials were not accepted were offered the opportunity to take a state board examination, but when they found an examination was necessary many refused to come up for it. In the general result, given at the foot of the columns, we find there were 7,035 students from all colleges examined before state boards with an average percentage of failures of 19.3.

An interesting point, too, is found in the separation of failures into two classes: one, the failures by students from colleges of the home state, and the other from colleges of outside states. I think there is food for reflection in these figures. Of 3,129 students examined by the state boards of the same states in which colleges were located, there was 9.2 per cent. failures; from outside colleges some 27.4 per cent. of failures. This is a comparative statement, but one of some value, and it is one which should be carefully analyzed. Undoubtedly one reason for the greater percentage of failures of students from colleges without the state is that the recent graduate usually appears before his own state board at a time when he is best prepared to pass a written examination. Many practitioners moving from one state to another ap-

The following tables are based on the reports of State Examining Boards for the year 1904, published in the *Journal of the American Medical Association*, May, 6, 1905.

In making comparisons, besides the percentage, one must consider also the total number examined and the number of State Boards before which representatives of the college appeared.

TABLE 1.—PERCENTAGE OF FAILURES, 0 to 10.

Margin No.	College.	Total.	Regst. on Diplom.	Examined. Passed.	Examined. Failed.	Percentage Failed.	No. of States.
	CALIFORNIA.						
5.	Med. Dept. Univ. of California	37	1	34	2	5.5	2
	COLORADO.						
11.	Denver and Gross Coll. of Med	49	32	16	1	5.9	12
	CONNECTICUT.						
14.	Yale University Dept. of Med	40	..	38	2	5.0	7
	DISTRICT OF COLUMBIA.						
15.	Columbian Univ. Dept. of Med	73	3	67	3	4.3	16
16.	Georgetown Univ. School of Med	43	2	37	4	9.7	14
	GEORGIA.						
20.	Medical Coll. of Georgia	31	1	30	0	0.0	3
	ILLINOIS.						
21.	American Med. Miss. Coll	19	5	13	1	7.1	12
22.	Bennett Coll. Ecl. Med. and Surg	18	1	16	1	5.9	8
25.	Coll. of P. and S., Chicago	259	15	227	17	7.0	22
26.	Hahnemann Med. Coll. and Hosp	64	9	53	2	3.6	12
28.	Hering Med. Coll	22	4	17	1	5.5	10
30.	Jenner Med. Coll.	20	..	18	2	10.0	2
31.	Northwestern Univ. Med. School	171	10	159	2	1.3	23
32.	Rush Med. Coll	298	38	245	15	5.8	26
	INDIANA.						
36.	Central Coll. of P. and S	11	..	10	1	9.0	4
	IOWA.						
42.	Drake Univ. Coll. of Med	17	2	14	1	6.7	3
45.	State Univ. of Iowa, Homeo. Dept	11	1	9	1	10.0	3
	LOUISIANA.						
58.	Tulane University, Med. Dept	91	2	82	7	7.8	9
	MARYLAND.						
63.	Med Dept. Johns Hopkins Univ	59	..	58	1	1.7	20
	MASSACHUSETTS.						
68.	Boston University School of Med	37	..	36	1	2.7	11
70.	Harvard University Med. School	160	4	155	1	0.6	17
	MICHIGAN.						
72.	Detroit College of Med	36	5	28	3	9.7	16
76.	Univ. of Mich. Dept. of M. and S	114	5	98	11	10.0	29
	MINNESOTA.						
79.	Coll. of Med. and Surg. U. of Minn.	109	3	104	2	1.9	13
	NEBRASKA.						
97.	John A. Creighton Med. Coll	44	4	39	1	2.5	9
	NEW YORK.						
100	Albany Medical College	51	..	46	5	9.8	7
101.	Coll. of P. and S	246	8	229	9	3.8	26
102.	Cornell Univ. Med. Coll	69	..	67	2	2.8	8
103.	Eclectic Med. Coll	15	4	11	0	0	3
104.	Long Island Coll. Hosp	52	1	50	1	2.0	7
105.	N. Y. Homeo. Med. Coll. and Hosp	33	1	31	1	3.1	7
108.	Syracuse Univ. Coll. of Med	37	1	36	0	0	8
109.	Univ. of Buffalo Med. Dept	54	4	46	4	8.0	7
	NORTH CAROLINA.						
112.	North Carolina Med. School	20	..	19	1	5.0	2
	OHIO.						
114.	Western Reserve Univ. Med. Coll	36	2	32	2	5.9	10
115.	Cleveland College of P. and S	18	1	16	1	5.9	5
118.	Medical Coll. of Ohio	59	9	49	1	2.0	11
	OREGON.						
125.	Univ. of Oregon Med. Dept	20	1	19	0	0	3
126.	Med. Dept. Willamette Univ	10	..	9	1	10.0	2
	PENNSYLVANIA.						
128.	Univ. of Pa. Dept. of Med	137	6	123	8	6.1	26
129.	Hahnemann Med. Coll. and Hosp	86	2	81	3	3.6	16
131.	Woman's Med. Coll. of Pa	54	..	49	5	9.2	12
	SOUTH CAROLINA.						
134.	Med. Coll. of the State of S. C	26	..	24	2	7.7	7
	TENNESSEE.						
138.	Vanderbilt Univ. Med. Dept	52	1	48	3	5.9	18
	TEXAS.						
147.	Univ. of Texas., Dept. of Med	22	..	22	0	0	3
	VIRGINIA.						
155.	Med. Coll. of Virginia	58	1	53	4	7.0	6
157.	Univ. of Va., Dept of Med	32	..	30	2	6.2	11

TABLE 2.—PERCENTAGE OF FAILURES, 10 to 20.

Margin No.	College.	Total.	Regst. on Diploma.	Examined. Passed.	Examined. Failed.	Percentage Failed.	No. of States.
	ALABAMA.						
2.	Medical College of Alabama	41	..	36	5	12.2	4
	CALIFORNIA.						
4.	Cooper Med. Coll	50	1	44	5	10.2	6
10.	Coll. of Med., Univ. of S. Cal	32	..	26	6	18.7	4
	GEORGIA.						
18.	Atlanta Coll. of P. and S	43	2	36	5	12.2	11
19.	Georgia Coll. of Eclectic M. and S	20	..	17	3	15.0	4

TABLE 2.—Continued.

	ILLINOIS.						
23.	Chicago Homeo. Med. Coll.	60	7	47	6	11.3	14
27.	Harvey Med. Coll.	25	1	20	4	16.7	8
34.	American Coll. of M. and S.	25	..	22	3	12.0	4
	INDIANA.						
37.	Med. Coll. of Indiana	29	6	20	3	13.0	7
	IOWA.						
44.	Sioux City Coll. of Med.	20	1	16	3	15.8	5
46.	State Univ. of Iowa, Med. Dept.	68	3	57	8	12.4	8
	MAINE.						
59.	Med. School of Maine, Bowdoin C.	32	..	27	5	15.6	6
	MARYLAND.						
64.	Southern Homeo. Med. Coll.	16	..	14	2	12.5	4
	MASSACHUSETTS.						
71.	Tufts Coll. Med. School	71	2	59	10	14.5	11
	MISSOURI.						
90.	Marion-Sims-Beaumont Coll. of M.	99	46	45	8	17.0	17
91.	St. Louis Coll. of P. and S.	74	29	36	9	20.0	17
94.	Med. Dept. Washington Univ.	90	44	38	8	17.4	17
	NEBRASKA.						
96.	Univ. of Neb. Coll. of Med.	51	10	36	5	12.2	9
	NEW HAMPSHIRE.						
99.	Dartmouth Med. Coll.	15	1	12	2	14.3	9
	NEW YORK.						
107.	Univ. and Bellevue Hosp. Med. C.	110	11	87	12	12.1	30
	OHIO.						
120.	Miami Med. Coll.	45	12	27	6	18.2	11
121.	Ohio Med. Univ.	68	7	49	12	19.7	20
	PENNSYLVANIA.						
130.	Jefferson Med. Coll.	224	9	189	26	12.1	34
133.	Western Pa. Med. Coll.	76	4	59	13	18.0	7
	TENNESSEE.						
137.	Med. Dept. Univ. of Nashville.	48	3	38	7	15.5	12
	VERMONT.						
154.	University of Vermont Med. Dept.	88	1	72	15	17.2	12
	VIRGINIA.						
156.	University Coll. of Med.	40	..	35	5	12.5	4

TABLE 3.—PERCENTAGE OF FAILURES, OVER 20 PER CENT.

Margin No.	College.	Total.	Regt. on Diploma.	Examined. Passed.	Examined. Failed.	Percentage Failed.	No. of States.
	CALIFORNIA.						
8.	Coll. of P. and S., San Francisco.	32	2	18	12	40.0	4
	DISTRICT OF COLUMBIA.						
17.	Howard Univ., Med. Dept.	37	..	22	15	40.5	14
	ILLINOIS.						
24.	Coll. of Med. and Surg.	19	..	12	7	36.8	3
29.	Illinois Med. Coll.	67	2	51	14	21.5	19
33.	National Med. Univ.	30	..	21	9	30.0	5
	IOWA.						
43.	Keokuk Med. Coll. of P. and S.	73	11	49	13	21.0	11
	KANSAS.						
48.	Kansas Med. Coll.	11	1	7	3	30.0	7
	KENTUCKY.						
50.	Hosp. Coll. of Med.	101	65	20	16	44.4	14
51.	Kentucky School of Med.	91	41	35	15	30.0	21
52.	Louisville Med. Coll.	78	31	35	12	25.5	16
55.	Med. Dept. Univ. of Louisville.	96	51	28	17	37.8	18
56.	Kentucky Univ., Med. Dept.	54	22	24	8	25.0	13
	LOUISIANA.						
57.	Flint Med. Coll., New O. Univ.	18	..	8	10	55.5	4
	MARYLAND.						
60.	Baltimore Med. Coll.	125	4	92	29	24.0	26
61.	Balt. Univ. School of Med.	75	10	20	45	69.2	14
62.	Coll. of P. and S. of Baltimore.	128	2	93	33	26.2	25
65.	Univ. of Maryland School of Med.	144	3	109	32	22.7	20
67.	Maryland Medical College.	92	1	55	36	39.5	16
	MASSACHUSETTS.						
69.	College of P. and S.	32	..	22	10	31.2	10
	MICHIGAN.						
74.	Michigan Coll. of Med. and Surg.	14	3	7	4	36.3	7
	MINNESOTA.						
80.	Med. Dept. of Hamline Univ.	41	2	23	16	41.0	5
	MISSOURI.						
83.	Univ. Med. Coll. of Kansas City.	81	50	16	15	48.4	15
85.	Kansas City Med. Coll.	41	20	10	11	52.4	12
87.	Central Med. Coll.	20	10	4	6	60.0	7
88.	Ensworth Med. Coll.	31	19	9	3	25.0	8
89.	Barnes Med. Coll.	144	79	45	20	30.8	24
	NEBRASKA.						
98.	Lincoln Med. Coll., Cotner Univ.	31	4	21	6	22.2	5
	NORTH CAROLINA.						
110.	Leonard Med. School, Shaw Univ.	34	..	12	22	64.7	6
	OHIO.						
116.	Cleveland Homeo. Med. Coll.	34	6	18	10	35.7	7
117.	Eclectic Med. Institute.	36	3	20	13	39.3	14
122.	Starling Med Coll.	51	5	36	10	21.7	9
	PENNSYLVANIA.						
132.	Medico-Chirurgical Coll. of Phila.	106	4	81	21	20.8	16
	TENNESSEE.						
135.	Tennessee Med. Coll.	12	2	4	6	60.0	5
139.	Univ. of Tenn. Med. Dept.	50	7	25	18	41.8	13
140.	Meharry Med. Coll.	53	7	32	14	30.4	14
141.	Memphis Hospital Med. Coll.	162	1	102	59	36.7	13
142.	Univ. of the South.	72	2	34	36	51.4	17
144.	Chattanooga Med. Coll.	46	2	29	15	34.1	10

pear before the state board years after their graduation at a period when they are not as well qualified to take such an examination. Then some states (New York, for example) having a high class of medical colleges would naturally have a smaller percentage of rejections from their own colleges than from colleges outside the state.

The more the subject of medical education in this country is studied, the clearer it becomes that the two agencies which must be relied on to elevate the standard of medical education are:

1. The state licensing boards, which have the legal power to enforce the laws regulating the practice of medicine.

2. The medical profession of each state, which must see to it that the state possesses efficient medical legislation, and, what is even more important, that the right sort of men are placed on the state board.

Acting in harmony, these two agencies can demand and secure satisfactory standards practically at once. The power to control medical practice is and always will be exercised by the state governments.

A national body, such as the American Medical Association, can only be of service in this movement by acting as a central bureau of information, which will collect all the evidence of existing conditions and furnish this evidence to the state boards and to the medical profession of the various states and to the medical schools. Publicity is often the best cure of an evil. Such a central body can be of service by formulating on the basis of this evidence a minimum standard as to preliminary requirements, medical curriculum, etc., the general adoption of which would result in higher requirements and greater uniformity.

In order to ascertain just what conditions prevailed in the various states and territories, a circular letter was sent to the president and secretary of each state examining board, asking definite questions regarding (1) the standard of preliminary education; (2) whether such preliminary education is passed on by a state official or not; (3) who this official should be; (4) the standard medical curriculum held by the state, and (5) whether or not lists of colleges are kept showing which were recognized and which not. Answers to this letter were received from all but six states and from these six the conditions have been since learned through other reliable sources, so that our data is practically complete. From these replies the following facts have been deducted: (See also table 7)

VARIATION IN LAWS.

In the wording of the laws regarding the standards of preliminary education required in the various states, there is a great variety of statements, some of them being quite indefinite, so that it is difficult to deduct positive conclusions. There are nine states, Colorado, Illinois, Indiana, Iowa, Michigan, New Jersey, New York, Ohio and Vermont, which require a four-year high-school diploma or equivalent as a minimum standard. There are five states which apparently hold the same requirements since they have adopted the standard of the Association of American Medical Colleges; these are California, Maryland, Nevada, North Dakota and Virginia. The laws of Connecticut, Kentucky, Missouri, New Hampshire and Wisconsin recognize a "diploma from an accredited (or registered, commissioned or approved) high school"; Nebraska requires a diploma from "a high school or college entrance standing"; and Minnesota, New Mexico and South Dakota require "a high-school diploma" or "a high-school educa-

tion." Undoubtedly, some of these mean a four-year high-school course, but just how many it is impossible to determine without further correspondence. Pennsylvania's law requires only a three-year high-school education, although the board of examiners states that a four-year high-school education is practically insisted on. Three states, Arizona, Maine and Washington, require "preliminary education satisfactory to the board"; Delaware and Indian Territory require "a common school education" and South Carolina requires "a first-grade teacher's certificate." We can find no mention of preliminary requirements in the laws and regulations of 29 states.

PRELIMINARY REQUIREMENTS.

Eleven states have taken some steps toward having the entrance credentials passed on by a state board or state official. In eight of these states, Indiana, Iowa, Kentucky, Michigan, New Jersey, New York, Ohio and Pennsylvania, all preliminary credentials are passed on not by the college, but by the board of examiners or state official, while in three states, Colorado, Illinois and Wisconsin, it is clear entrance examinations are conducted by the state official, but it is not clear whether other entrance credentials are inspected by this state official or by the medical college. The states in which credentials are all carefully scrutinized by the board or state official and a "certificate of qualification" is issued at the time of matriculation, are to this extent on a similar footing with British requirements where registration of every medical student before or at the time of matriculation is required. There are twelve states which still allow undergraduates to take the licensing examination. These are Alabama, Arkansas, Colorado, Indian Territory, Massachusetts, Mississippi, Missouri, Nevada, Oregon, Tennessee, Texas and West Virginia. Of these, Colorado, Indian Territory and Missouri require that the applicant must have studied four full years, while in the others there is no statement as to whether there is any requirement, so long as the applicant can pass the examination.

ADVANCED STANDING FOR A.B., B.S.

Four states, Iowa, Kentucky, Minnesota and New York, do not sanction the giving of advanced standing to graduates of colleges of liberal arts. Minnesota and Iowa refuse to recognize any diploma from a medical school which gives such advanced standing. New York and Kentucky allow the medical school to do as it pleases, but rejects the applicant in case he has not had the full four years' course in a medical college. In 34 states provision is made requiring four full courses in separate years, three states, Delaware, Georgia and North Carolina have three years as the minimum, while 15 make no statement. Twenty-three states, or 27 if we include California, Maryland, Nevada and Virginia, have endeavored to regulate the length of the college year either by the requirements of a definite number of weeks or months. Seven of these place the minimum at 6 months, Georgia, Indian Territory, Kansas, Montana, Nebraska, New Hampshire and New York; four, Connecticut, Minnesota, South Carolina and South Dakota require 26 weeks (6½ months); eight, Iowa, Missouri, Ohio, New Jersey and Wisconsin, require 7 months; seven, California, Illinois, Indiana, Kentucky, Maryland, Nevada and Virginia, require 7½ months; North Dakota requires 8, Michigan 8½ an Colorado 9 months.

MEDICAL CURRICULUM.

Only one state, Michigan, has adopted the medical curriculum setting forth a definite number of hours in definite subjects, unless we include

TABLE 4.—UNCLASSIFIED COLLEGES.

In this table are all colleges having less than 10 graduates examined, having all examined in the home state, or otherwise showing insufficient data to allow comparison.

Margin No.	College.	Total.	Regst. on Diploma.	Examined. Passed.	Examined. Failed.	Percentage Failed.	No. of States.
	ALABAMA.						
1.	Birmingham Med. Coll.	4	..	4	0	0	2
	ARKANSAS.						
3.	Med. Dept. Arkansas Univ.	3	..	2	1	33.3	2
	CALIFORNIA.						
6.	California Med. Coll.	12	4	3	5	62.5	3
7.	Hahnemann Med. Coll., Pacific.	9	1	7	1	12.5	2
	COLORADO.						
12.	Denver Homeo. Coll.	6	6	..	..	..	1
13.	Colorado School of Med.	22	15	7	0	0.0	9
	ILLINOIS.						
35.	Dearborn Med. Coll.	18	..	18	0	0	1
	INDIANA.						
38.	Physio-Med. Coll. of Ind.	5	..	4	1	20.0	3
39.	Eclectic Med. Coll. of Indiana	2	..	2	0	0	1
40.	Ft. Wayne Coll. of Med.	4	1	1	2	66.7	3
41.	Indiana Univ. School of Med.	1	0	1	0	0	1
	MISSOURI.						
47.	Coll. of P. and S., Kansas City.	1	..	1	0	0	1
	KENTUCKY.						
53.	Louisville Nat. Med. Coll.	1	..	1	0	0	1
54.	Southwestern Homeo. Med. Coll.	8	8	..	..	..	2
	MARYLAND.						
66.	Women's Med. Coll. of Baltimore.	3	2	1	0	0	2
	MICHIGAN.						
73.	Detroit Homeo. Med. Coll.	3	..	2	1	33.3	3
75.	Grand Rapids Med. Coll.	1	..	1	0	0	1
77.	Univ. of Michigan, Homeo. M. C.	6	2	3	1	25.0	4
	MINNESOTA.						
78.	Coll. of Homeo. Med. and Surg.	4	..	3	1	25.0	3
	MISSOURI.						
82.	Medico-Chirurgical College.	22	16	4	2	33.3	6
84.	Kansas City Hahnemann Med. Coll.	14	8	3	3	50.0	6
86.	Eclectic Med. Univ.	17	14	2	1	33.3	4
92.	American Medical College.	14	9	1	4	80.0	6
93.	Homeo. Med. Coll. of Missouri.	16	11	1	4	80.0	6
95.	Univ. of State of Missouri.	15	13	2	0	0	4
	NEW YORK.						
106.	N. Y. Med. Coll. and Hosp for Wom.	10	1	9	0	0	2
	NORTH CAROLINA.						
113.	Med. Dept. Univ. of N. C.	4	..	4	0	0	1
	OHIO.						
119.	Pulte Med. Coll.	11	3	5	3	37.5	8
123.	Toledo Medical College	8	2	3	3	50.0	3
	PENNSYLVANIA.						
127.	Temple Coll. of Phila., Dept. of M.	1	..	1	0	0	1
	TENNESSEE.						
136.	Knoxville Med. Coll.	3	..	0	3	100.0	3
145.	Univ. of West Tenn. Med. Dept.	3	..	2	1	33.3	2
	TEXAS.						
146.	Med. Dept. Fort Worth Univ.	4	..	4	0	0	1
148.	Baylor Univ. Coll. of Med.	2	..	1	1	50.0	2
150.	Dallas Med. Coll.	7	..	3	4	57.1	4
	WISCONSIN.						
159.	Milwaukee Med. Coll.	7	..	5	2	28.5	3
160.	Wisconsin Coll. of P. and S.	5	..	3	2	40.0	3

TABLE 5.

Showing totals and percentages rejected on examination by State Examining Boards of applicants from (1) all colleges; (2) colleges in the home state and (3) colleges of other states.

State Examining Board of	Colleges All States.					Colleges of Home State.					Colleges of Other States.				
	Total.	Regst. without Examination.	Examined; Passed.	Examined; Failed.	Percentage Failed.	Total Examined.	Percentage of All Examined.	Examined; Passed.	Ex. mined; Failed.	Percentage Failed.	Total Examined.	Percentage of All Examined.	Examined; Passed.	Examined; Failed.	Percentage Failed.
*Alabama	138	..	118	20	14.5	38	27.5	37	1	2.6	100	72.5	81	19	29.0
Arizona	35	..	28	7	20.0	a	..	..	..	..	35	100.0	28	7	20.0
*Arkansas	152	..	115	37	24.3	1	1.3	1	1	50.0	150	98.7	114	36	24.0
California	266	..	216	80	27.0	145	49.0	121	24	16.5	151	51.0	95	56	37.0
*Colorado	388	375	3	10	76.1	..	..	..	..	..	13	100.0	2	10	76.1
Connecticut	93	..	67	26	28.0	23	24.7	21	2	8.7	70	75.3	46	24	34.3
Delaware	11	..	10	1	9.0	a	..	..	..	..	10	90.9	10	1	9.0
Dis. of Col	92	..	78	14	15.2	71	77.2	63	8	10.1	21	22.8	15	6	28.6
Georgia	114	..	110	4	3.5	66	57.9	66	0	0.0	48	42.1	44	4	8.1
†Florida	..	..	..	..	..	a	..	..	..	..	..	..	..	..	..
Idaho	39	..	23	16	41.0	a	..	..	..	..	39	100.0	23	16	41.0
Illinois	762	..	728	34	4.5	588	77.2	564	24	4.1	174	22.8	164	10	5.7
Indiana	174	..	150	24	13.8	29	16.7	27	2	6.9	145	83.3	123	22	15.1
Iowa	290	..	238	52	17.9	132	45.5	120	12	9.0	158	54.5	118	40	25.3
Kansas	77	..	64	13	16.8	1	1.3	1	0	0.0	76	98.7	63	13	82.8
Kentucky	265	255	4	6	60.0	10	0	0	1	100.0	9	90.0	4	5	55.6
Louisiana	140	..	120	20	14.3	64	45.7	59	5	7.9	76	54.3	61	15	19.7
Maine	74	..	60	8	10.8	26	35.1	21	5	19.3	48	64.9	45	3	6.2

TABLE 5—Continued.

Maryland	187	121	66	35.3	16	0	85.5	105	55	34.3	27	14.5	16	11	40.7
*Mass	397	320	77	19.4	181	45.5	170	11	6.7	216	54.5	150	66	30.5
Michigan	53	52	1	1.9	0	75.4	39	1	2.5	13	24.6	13	0	0.0
Minnesota	161	134	27	16.7	92	57.1	80	12	13.0	69	42.9	54	15	21.8
*Mississippi	249	119	130	52.2	*b*					249	100.0	119	130	52.2
†Missouri	299	299												
Montana	31	21	10	32.2	*a*					31	100.0	21	10	32.2
Nebraska	100	93	7	7.0	79	79.0	73	6	7.5	21	21.0	20	1	4.8
Nevada	2	2	0	0.0	*a*					2	100.0	2	0	0.0
New Hamp	42	33	9	21.4	3	7.2	3	0	0.0	39	92.8	30	9	23.0
New Jersey	96	76	20	20.8	*a*					96	100.0	76	20	20.8
New Mexico	11	9	2	18.1	*a*					11	100.0	9	2	18.1
New York	729	667	62	8.5	486	66.7	472	14	2.9	243	33.3	195	48	19.7
N. Carolina	93	74	19	20.4	27	29.1	24	3	11.2	66	70.9	50	16	24.5
N. Dakota	67	54	13	17.9	*a*					67	100.0	54	13	19.5
Ohio	349	236	13	5.2	187	75.1	177	10	5.4	62	24.9	59	3	4.8
*Oklahoma	66	30	36	54.5	*b*					66	100.0	30	36	54.5
Oregon	76	70	6	7.9	24	31.6	24	0	0.0	52	68.4	46	6	11.5
Penn	581	460	121	20.8	409	70.4	356	53	12.9	172	29.6	104	68	39.5
R. Island	57	52	5	8.9	*a*					57	100.0	52	5	8.8
S. Carolina	55	49	6	10.9	*a*					55	100.0	49	6	10.9
S. Dakota	48	36	12	25.0	*a*					48	100.0	36	12	25.0
*Tennessee	273	166	107	39.2	117	42.5	91	26	22.2	156	57.5	75	81	51.9
*Texas	188	3	96	87	42.0	26	14.2	23	3	11.5	157	85.8	73	84	53.5
Utah	38	31	7	18.4	*a*					38	100.0	31	7	18.4
Vermont	55	54	1	1.8	37	67.3	37	0	0.0	18	32.7	17	1	5.6
Virginia	175	121	54	30.8	71	40.6	64	7	9.9	104	59.4	57	47	45.1
Washington	181	135	46	25.4	*a*					181	100.0	135	46	25.4
*W. Virginia	203	163	40	19.7	*b*					203	100.0	163	40	19.7
Wisconsin	67	60	7	10.4	4	5.9	2	2	50.0	63	94.1	58	5	7.9
Wyoming	65	65			*a*									
	8934	969	5672	1356	19.3	3129	44	7	2841	288	9.2	3867	2808	1059	27.4

Totals of the first group contain graduates of foreign colleges and undergraduates, which are not contained in groups two and three.

* Non-graduates allowed to take examinations. † Impossible to get data, as items were not recorded. *a*, States have no medical colleges. *b*, States graduating no students.

TABLE 6.

Arranged in order of the percentage rejected by each State Examining Board, showing number examined and percentage rejected from (1) all colleges, (2) home colleges and (3) colleges of other states.

State Examining Boards of	Colleges, All States.		Colleges, Home State.		Colleges, Other States.	
	Total Examined.	Percentage Failed.	Total Examined.	Percentage Failed.	Total Examined.	Percentage Failed.
*Colorado	13	76.1			13	76.1
Kentucky	10	60 0	1	100.0	9	55.6
*Oklahoma	66	54.5			66	54.5
*Mississippi	249	52.2			249	52.2
*Texas	183	42.0	26	11.5	157	53.5
Idaho	39	41.0			39	41.0
*Tennessee	273	39.2	117	22.2	156	51.9
Maryland	187	35.3	100	34.3	27	40.7
Montana	31	32.2			21	32 2
Virginia	175	30.8	71	9.9	104	45.1
Connecticut	93	28.0	23	8.7	70	34.3
California	296	27.0	145	16.5	151	37 0
Washington	181	25.4			181	25.4
South Dakota	48	25.0			48	25.0
*Arkansas	152	24 3	2	50.0	150	24.0
New Hampshire	42	21.4	3	0.0	39	23.0
New Jersey	96	20 8			96	20.8
Pennsylvania	581	20.8	409	12.9	171	39.5
North Carolina	93	20.4	27	11.2	66	24.5
Arizona	35	20.0			35	20.0
*West Virginia	203	19.7			203	19.7
*Massachusetts	397	19.4	181	6.7	216	30.5
Utah	38	18.4			38	18.4
New Mexico	11	18.1			11	18.1
North Dakota	67	17.9			67	17.9
Iowa	290	17.9	132	9.0	158	25 3
Kansas	77	16.8	1	0.0	76	82 8
Minnesota	161	16.8	92	13.0	69	21.8
District of Columbia	92	15.2	71	10.1	21	28.6
*Alabama	138	14.5	38	2.6	100	29 0
Louisiana	140	14 3	64	7.9	76	19.7
Indiana	174	13.8	29	6 9	145	15.1
South Carolina	55	10.9			55	10.9
Maine	74	10.8	26	19.3	48	6.2
Wisconsin	67	10 4	4	50.0	63	7.9
Delaware	11	9.0			11	9.0
Rhode Island	57	8.8			57	8.8
New York	729	8.5	486	2.9	243	19.7
Oregon	76	7.9	24	0.0	52	11.5
Nebraska	100	7.0	79	7.5	21	4.8
Ohio	249	5 2	187	5.4	62	4 8
Illinois	762	4.5	588	4.1	174	5.7
Georgia	114	3.5	66	0.0	48	8.1
Michigan	53	1 9	40	2.5	13	0.0
Vermont	55	1.8	37	0.0	18	5.6
Nevada	2	0.0			2	0.0
	7035	19.3	3129	9.2	3867	27.4

* Non-graduates allowed to take examinations.

California, Maryland, Nevada, North Dakota and Virginia, which appear to have adopted the standard of the Association of American Medical Colleges. This, if enforced, would give these states the same standard curriculum as Michigan. Five other states have endeavored in a way, to fix a curriculum requirement, 2, Connecticut and Indiana, by stating the minimum hours per week, for a definite number of weeks each year, and 3, Colorado, Illinois and Vermont, by requiring a minimum number of hours each year. Therefore, only 6 states have arranged in any way for a medical curriculum on a basis of hours required unless we may add the 5 states named above which have adopted the standard of the Association of American Medical Colleges. Therefore, before the standard of the American Medical Association shall become the standard throughout this country, at least 29 states must provide for higher entrance requirements; 40 must provide for registration of medical students before a board of entrance examiners, or a state official, at the time of matriculation; 36 should require higher requirements as to the length of year and 4 should require an examination.

PRELIMINARY EXAMINERS.

As to the official who should pass on the entrance credentials, the majority seem to favor a board rather than an individual; first, because to do the work thoroughly requires more than one, and again, the decisions are less apt to be criticised or to be open to suspicion. Indiana, New York and Michigan have boards. In Illinois, New Jersey, Pennsylvania and Wisconsin entrance requirements are inspected by the State Superintendent of Public Instruction (or in Illinois, superintendent of public schools); in Kentucky by an examiner certified by the state board, while in Ohio there are four different examiners at the four seats of medical education. In Colorado, the law states that the entrance examination shall "not be conducted by the medical college." Classified lists are kept by several states, notably New York and Michigan.

To sum up, the work of the Council for the past year has been:

1. The publication of the standards adopted by the American Medical Association, by printed circulars, by letter and by requesting presidents of state associations to make the subject of medical education a portion of their annual address.

2. Ascertaining the conditions actually existing as regards licensure to practice medicine in the various states.

3. Working for the appointment of committees on medical education in connection with the state medical societies.

4. Laying plans for work through the state examining boards and through the committees on medical education to secure the adoption of the minimum standard in the various states.

5. Collecting, tabulating and publishing the results of state board examinations, showing how many passed and how many failed of the graduates of various medical colleges.

6. Compiling and publishing abstracts of the laws and board rulings governing medical licensure in the various states and territories, as well as extracts from requirements in foreign countries.

7. Compiling of facts regarding medical colleges to be issued in book form, giving the seat, history, hospitals, dispensaries, buildings, equipment, teaching force, preliminary requirements, admission to advanced standing, medical curriculum, requirements for graduation, fees, number of graduates for the current year, length of college year and the name of the dean of each medical college in the United States.

8. Preparation of a list of all medical colleges which have ceased to exist under their original names, whether through merging with other colleges, or otherwise becoming extinct.

7. We believe that for the present every effort of the Association should be made to secure the adoption of the standards recommended by the House of Delegates at the Portland session, and which we believe can be accomplished as planned by Jan. 1, 1908.

The next advance in medical education in this country must be the addition of a year between the high school course and the present four-year course in the medical school, this year to be devoted to chemistry, physics and biology. When this is secured our standards will be equal to those of Great Britain and other European nations.

That this desirable advance is not far off is shown by the fact that a resolution embodying this provision has just been unanimously adopted by the National Confederation of Examining Boards at their meeting in Boston. It is probable that during the year a number of state licensing boards will agree to this recommendation. If in addition to this, the thirty or forty medical schools which are doing the best work publicly announce that all students admitted after 1910 must possess these scientific requirements, this advance will be assured.

On motion, the report was referred to the Reference Committee on Medical Education (see page 1875).

Report of Committee on Medical Legislation.

READ AND REFERRED TO COMMITTEE (see page 1875).

Dr. Charles A. L. Reed, Cincinnati, Ohio, presented the report of the Committee on Medical Legislation.

The past year has been characterized by a great diversity of demands on the legislative organization of the American Medical Association. This diversity grows out of the fact that a larger number of bills covering a greater number of subjects and subjects of greater importance, have been presented to Congress, than during any year since the Association has undertaken to look after legislative questions in a systematic manner. This fact was set forth in detail in the report of the conference held between the Committee on Medical Legislation and the National Legislative Council, which took place at Washington, January 9-11, which report was published in THE JOURNAL, Jan. 20, 1906. It is unnecessary in this connection to discuss these various measures in detail, but merely to call attention to the fact that they embrace the following subjects—namely:

(a) A Department of Public Health, with Representation in the Cabinet.
(b) The Army Medical Reorganization Bill.
(c) The Pure Food and Drug Bill.
(d) Amendment of the Lunacy Laws of the District of Columbia.
(e) Governmental Regulation of Indigent Consumptives.
(f) Anti-nostrum Crusade.
(g) Government Recognition of the Services of Dr. James Carroll.
(h) Regulation of Medical Practice in the Government Reservation of Hot Springs.
(i) Bill for the Relief of the Widow of the Late Surgeon-General Wm. A. Hammond.
(j) Bill to Restore the Canteen in the Army.
(k) Bill Regulating the Treatment of Inebriates in the District of Columbia.
(l) The Postoffice Attitude Toward Nostrums.

These various measures were submitted to committees of the conference and were acted on in the light of the reports of such committees. Several measures of minor importance were brought to the attention of the conference, but from the fact that the energies of the legislative organization were already too much divided, it was thought inexpedient to take them up at this juncture. In this same connection it was urged that even those measures that received affirmative action at the hands of the legislative council were too numerous to enable either the legislative council or the National Auxiliary Legislative committee to give sufficient attention to any one of them to awake the influence that the profession most effectively felt at Washington. It is recommended, therefore, that in future the action of the legislative council be restricted only to measures of paramount importance. By this it is not meant to exclude from consideration bills of special or minor importance—for to do so would be to open again the floodgates of Congress to a lot of measures that lack any merit, but that from their very nature would be charged to the medical profession. Such minor and special measures ought to be considered in conference, and, when meritorious, formally endorsed and thereafter left to the labors of their respective champions. Only meas-

TABLE 7.

Showing apparent inequalities and deficiencies in laws governing medical licensure, April 1, 1906.

State.	Law Includes Preliminary Requirements.	Preliminary Credentials Inspected by State Office al.	Board Accepts Non-graduates.	Requires Examination of All Applicants.	Advanced Standing for A.B., B.S.	Required Years of Medical Study.	Requires Definite Courses in Curriculum.	Minimum Hours per Week.	Minimum Weeks per Year.	Required Months per Year.	Minimum Hours per Year.	Minimum Total Hours of Course.
Alabama	.....	.....	.....	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
*Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arizona	.....	.....	No	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
Arkansas	.....	.....	.....	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
†California	Yes.	Yes.	No	Yes.	.....	4	Yes.	30	30	7½	900	3600
Colorado	Yes.	Yes.	.....	.....	.....	4	Yes.	.....	.....	9	900	1600
Connecticut	Yes.	.....	No	Yes.	.....	4	Yes.	36	26	6½	936	3744
Delaware	.....	.....	No	Yes.	.....	3	Yes.	.....	.....	.....	.....	.....
Dist. of Col	.....	.....	No	Yes.	.....	4	Yes.	.....	.....	.....	.....	.....
Florida	.....	.....	No	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
Georgia	.....	.....	No	Yes.	.....	3	Yes.	.....	.....	6	.....	.....
Idaho	.....	.....	No	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
Illinois	Yes.	Yes.	No	Yes.	.....	4	Yes.	.....	30	7½	800	3200
Indiana	Yes.	Yes.	No	Yes.	.....	4	Yes.	36	30	7½	1080	4320
Indian Ter.	.....	.....	.....	.....	.....	4	Yes.	.....	.....	6	.....	.....
Iowa	Yes.	Yes.	No	Yes.	No	4	Yes.	.....	26	7	.....	.....
Kansas	Yes.	.....	No	Yes.	.....	4	Yes.	.....	.....	6	.....	.....
Kentucky	Yes.	Yes.	No	Yes.	No	4	Yes.	.....	30	7½	.....	.....
Louisiana	.....	.....	No	Yes.	.....	4	Yes.	.....	.....	.....	.....	.....
Maine	.....	.....	No	Yes.	.....	4	Yes.	.....	.....	.....	.....	.....
†Maryland	.....	.....	No	Yes.	.....	4	Yes.	30	30	7½	900	3600
Mass.	.....	.....	.....	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
Michigan	Yes.	Yes.	No	Yes.	.....	4	Yes.	36	34½	8½	900	3600
Minnesota	Yes.	.....	No	Yes.	No	4	Yes.	.....	26	6½	.....	.....
Mississippi	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	.....	.....	.....
Missouri	.....	.....	.....	Yes.	.....	4	Yes.	.....	.....	7	.....	.....
Montana	.....	.....	No	Yes.	.....	4	Yes.	.....	.....	6	.....	.....
Nebraska	Yes.	.....	No	Yes.	.....	4	Yes.	.....	.....	6	.....	.....
†Nevada	Yes.	.....	†	†	.....	4	.....	†	†	†	†	†
New Hamp.	Yes.	.....	No	Yes.	.....	4	Yes.	.....	.....	6	.....	.....
New Jersey	Yes.	Yes.	No	Yes.	.....	4	Yes.	.....	.....	7	.....	.....
New Mexico	.....	.....	No	.....	.....	4	.....	.....	.....	.....	.....	.....
New York	Yes.	Yes.	No	Yes.	No	4	Yes.	.....	.....	6	.....	.....
N Carolina	.....	.....	No	Yes.	.....	3	Yes.	.....	.....	.....	.....	.....
†N. Dakota	Yes.	.....	No	Yes.	.....	4	Yes.	30	30	8	900	3600
Ohio	Yes.	Yes.	No	Yes.	.....	4	Yes.	.....	.....	7	.....	.....
Oklahoma	.....	.....	No	Yes.	.....	4	Yes.	.....	.....	.....	.....	.....
Oregon	.....	.....	.....	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
Penn	Yes.	Yes.	No	Yes.	.....	4	Yes.	.....	.....	.....	.....	.....
R. Island	.....	.....	No	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
S. Carolina	.....	.....	No	Yes.	.....	4	Yes.	.....	26	6½	.....	.....
S. Dakota	Yes.	.....	No	Yes.	.....	4	Yes.	.....	26	6½	.....	0
Tennessee	.....	.....	.....	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
Texas	.....	.....	.....	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
Utah	.....	.....	No	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....
Vermont	Yes.	.....	No	Yes.	.....	4	Yes.	.....	.....	.....	900	360
†Virginia	Yes.	.....	No	Yes.	.....	4	Yes.	30	30	7½	900	3600
Washington	.....	.....	No	Yes.	.....	4	Yes.	.....	.....	.....	.....	.....
West Virginia	.....	.....	.....	Yes.	.....	4	Yes.	.....	.....	.....	.....	.....
Wisconsin	Yes.	Yes.	No	Yes.	.....	4	Yes.	.....	.....	7	.....	.....
Wyoming	.....	.....	No	Yes.	.....	.....	Yes.	.....	.....	.....	.....	.....

* Law proposed but not adopted as yet.
† Law provides for standards of the Association of American Medical Colleges.

9. Securing, tabulating and publishing of statistics regarding medical students in the medical colleges of the United States and the graduating classes for the last year.

10. Collecting and filing any other obtainable information bearing upon medical education.

Besides the work as outlined in the foregoing report the Council desires to add the following statement:

1. The Council is more and more impressed with the possibility of elevating the standards of medical education through the efforts of the organized profession.

2. That the two most important factors which must be considered in this movement are the state examining and licensing boards and the state medical societies.

3. The state licensing boards represent the power to execute and the state medical societies represent the best means of securing the state laws, which must be secured and executed before proper standards can be established and maintained.

4. The higher class medical schools will of their own volition adopt and maintain proper standards.

5. The lower class medical schools, "the schools for profit," must be compelled by the law executed by the state licensing boards to live up to proper standards.

6. The problem before us therefore resolves itself at present into, first: The securing of efficient medical legislation in each state through the efforts of the organized profession in each state; and, second, the securing of efficient medical men to serve on the state examining and licensing boards.

ures of a strictly national character, dealing in a very important way with fundamental questions, ought in future to be referred to our large auxiliary committee.

THE NATIONAL LEGISLATIVE COUNCIL.

The National Legislative Council has again demonstrated its value as a consultive body in questions of pending legislation. Attention is called to the fact, however, that many of the states and territories were not represented at this conference. This grew out of the failure of many of the state associations to appoint delegates, or when appointing them, failing to provide means for defraying their expenses. The state associations should realize the responsibility that rests with them in promoting legislation by Congress and the extreme importance of providing active representation in the National Legislative Council.

NATIONAL AUXILIARY LEGISLATIVE COMMITTEE.

This committee, consisting theoretically of one member in each county of the United States, actually of 2,130 members, is of extreme importance in bringing the influence of the medical profession to bear on members of Congress. It is, indeed, an effective arm of our legislative organization. On the National Legislative committee devolves, and must continue to devolve, the responsibility of maintaining in number and character, the personnel of this extensive organization. Without this auxiliary committee your National Legislative committee, technically your Committee on Medical Legislation, would find itself reduced to the mere function of making verbal representations to the Congress.

But by this large committee we appeal very effectively to all of the members of Congress, through either the local district societies or through the avenue of their actual constituents.

Too much praise can not be given to the faithfulness and efficiency of this large auxiliary committee, which has at all times responded promptly and faithfully to the demands of the central organization.

THE QUESTION OF ESPRIT DU CORPS.

This leads your committee to observe with extreme satisfaction that the profession as reflected through the national auxiliary committee, and as represented in the various local organizations, state and national, has manifested a most wholesome *esprit du corps*. In times past every member of the profession who had any opinion on any subject, however immature that opinion might be, felt it incumbent on himself to communicate his views directly to his representatives at Washington. Now, however, under the influence of organization, these views are expressed in county and state associations, are developed with a reasonable degree of maturity, and are then communicated to Congress through the recognized channels of the profession. In this way, as never before, the medical profession of the United States is enabled to bring its influence to bear on public questions. The most hopeful sign of the times in this particular has been a general acquiescence on the part of the profession in this program. In only a single instance have influential members of the profession seen fit to ignore the consensus of opinion of the great national body by appearing in person before the committees of Congress to make personal representations that were inimical to the interests of the legislation desired and demanded by the general profession. This instance occurred in connection with the hearings in the pure food and drug bill. The suggestions were seized on by the enemies of that measure to weaken the force and effectiveness of the proposed measure. It is to be hoped that the future will fail to reveal any instance in which any physician, otherwise in good standing in the medical profession, will so far forget his obligations to his profession as to become the representative of the interests engaged in the manufacture and sale of spurious drugs and adulterated foods, as against the carefully determined and justly thought out demands of his profession.

BUREAU OF MEDICAL LEGISLATION.

In the report of the Committee on Medical Legislation presented at Portland a year ago the recommendation was made that a Bureau of Medical Legislation be established in the office of the Association at Chicago. This recommendation was concurred in, but for practical reasons it was found inexpedient to carry out the provision. The recommendation is renewed this year, with the belief that the contemplated step will add to the efficiency of the legislative organization. This grows out of the fact that the work of the Association has grown up into several departments, which departments could be made co-operative in carrying on the work of this committee. Thus, the Information Bureau of the American Medical Directory could at all times be made available in determining questions of personnel in connection with the large auxiliary committee; the general correspondence of the office is constantly bringing in information that can be referred with advantage to the Bureau of Legislation; the news department of THE JOURNAL could be furnished with items from all over the country, gleaned from the extensive correspondence with the auxiliary committee; but above all, proximity to the printing facilities of the Association would enable the bureau to get out its own large volume of correspondence with greater expedition. This is often a matter of vital importance—particularly in instances in which a pending measure has been assigned for final hearing on short notice by the committee on rules, necessitating an almost immediate issuance of a general referendum. At such times a single day is of extreme importance in getting out an appeal to the Auxiliary Legislative committee. It is to be hoped, therefore, that the previous action of the House of Delegates in creating a Bureau of Legislation will be reaffirmed, and that effective steps will be taken to carry it into operation.

These effective steps should consist in placing the work of the bureau in the hands of a representative located in Chicago, invested with executive authority to conduct the necessary correspondence. The mere fact that your chairman, on whom this work has devolved during the past and the several preceding years, resided at a considerable distance from Chicago, has made it inexpedient for him to assume direct charge of the proposed bureau. This condition of affairs should be corrected, either by selecting an executive for the committee who resides in Chicago, or providing for the committee a secretary with authority to proceed with the work.

AN APPROPRIATION TO DEFRAY EXPENSES INCIDENT TO FORMULATING A BILL FOR A DEPARTMENT OF PUBLIC HEALTH.

The American Medical Association has stood committed to a National Department of Public Health, with representation in the Cabinet, ever since it took affirmative action on this question at Washington in 1891. The gradual evolution of the Bureau of Public Health, known technically as the Bureau of Public Health and Marine-Hospital Service, has been viewed with extreme satisfaction by the American Medical Association, as expressed in a resolution adopted last year at Portland. The matter had reached that point when it was taken up by the conference with the National Legislative Council at Washington in January, resulting in the adoption of the following:

WHEREAS, The medical profession at the Portland Session of the American Medical Association had good reason for endorsing the excellent work done by the Public Health and Marine-Hospital Service during the preceding ten years, has now better reason for asking for an amplification of its powers in view of the valuable services rendered commerce and the most vital interests of this country during the recent epidemic of yellow fever in the south and realizing that the national public health service should be placed on an independent basis; therefore be it

Resolved, That it is the sense of the American Medical Association that a Department of Public Health, with representation in the Cabinet of the President, ought to be established, such department to embrace an expansion of the present Public Health and Marine-Hospital Service, with the addition of other public health agencies now existing and in operation in other departments of the government, together with such additional agencies and functions as may best subserve the public welfare.

Resolved, That the National Committee on Legislation be and is hereby instructed to proceed at once with the preparation of a bill for this purpose to be presented to Congress at the earliest practicable date, if possible during the present session.

Resolved, That the Trustees of the Association be and are hereby requested to appropriate one thousand dollars ($1,000.00), or so much of the same as may be required to defray the expenses of the Committee on Legislation in employing a competent constitutional lawyer to draft a bill for a Department of Public Health contemplated by these proceedings.

The purposes of this resolution have not been carried into effect because the necessary funds have not been provided with which to defray the expenses in connection with the preparation of the bill. This question is brought to the attention of the House of Delegates with the request that the necessary action be taken in the premises.

THE PURE FOOD AND DRUG BILL.

The National Legislative Council reaffirmed its previous action in favor of the pure food and drug bill and renewed its representations to Congress touching this very important measure. This measure has passed the Senate in its original and effective form. It has been reported favorably from the committee of the House, with two amendments, which weaken, but do not entirely destroy its salutary provisions. It is now awaiting the pleasure of the speaker and of the committee on rules for consideration by the House.

It seems that there is a disposition on the part of the speaker and of some members of the committee on rules, arbitrarily to exclude this measure from consideration by the House. It is urged, therefore, that the House of Delegates during its present session, adopt a resolution urging the speaker, in connection with the committee on rules, to provide for the early consideration of the measure by the House, and that such resolution be telegraphed in duplicate to the speaker of the House of Representatives and to the chairman of the committee on rules.

ORGANIZATION FOR THE SUPPRESSION OF QUACKERY.

Your committee has had referred to it the question of organizing a movement whose sole object shall be to deal with the question of quackery as represented not only in the manufacture and purveying of poisonous or otherwise deleterious proprietary medicines, but in the dishonest representations that are made by unscrupulous pretenders through the advertising medium of periodical publications and through the United States mails. The fact that the American Medical Association is interested in any endeavor to safeguard the public health and morals and that it is in consequence opposed to the depredations of medical quacks and charlatans in continually robbing their helpless victims and endangering the public health, and the fact that it is likewise antagonistic to the manufacturers of so-called "patent medicines," who are debauching the public health and morals by the sale of alcohol and narcotics under the guise of medicines—it seems important that for these and other reasons, the House of Delegates should take some action to co-operate with non-professional elements of society in correcting these evils. With this object in view it might be well for the House of Delegates to instruct its Committee on Medical Legislation to attend a proposed conference of delegates from other societies and organizations, lay and professional, to be held in the City of New York on November 15 next, for the purpose of effecting a national organization whose specific object shall be to deal with this very perplexing question. The mere fact that medical societies when taking individual action on this question are supposed to be actuated by personal and selfish motives makes it highly important to remember that the initiative in this proposed movement comes from influences entirely outside of the medical profession. It is this fact which points with peculiar significance to the probable efficiency of the movement.

GENERAL EXPENSES OF THE COMMITTEE.

It is urged on the House of Delegates that a generous appropriation for the expenses of the committee be directed. Efficient work can not be undertaken unless the officer in charge of the executive work of the Legislative committee can feel that he has reasonable leeway in the matter of expense. The policy adopted during the last year has not been one of cordial support of the committee. As a result, instead of issuing individual referenda, all the subjects were sent to the profession under cover of one referendum. This is a far less effective way of carrying on the work than by asking for individual action in individual instances. An appropriation of not less than $2,000 ought to be devoted to the current expenses of this committee. The House of Delegates is respectfully urged to take action on this question.

COMPENSATION OF OFFICERS.

In submitting this report of the Committee on Medical Legislation, the chairman urges on the House of Delegates consideration of the following facts:

1. The work of the committee demands the attention of an executive officer for a very considerable time, practically every day in the year.

2. This time must be taken from the usually remunerative labors of his profession.

3. Identification with this branch of the work does not bring any indirect remuneration, but becomes a source of additional expense by diverting attention from the strictly professional work of the executive officer.

4. The Association ought not, therefore, to expect or accept such service without some measure of pecuniary compensation.

The House of Delegates is urged seriously to take this matter under consideration. The matter is brought to their attention with all the less hesitancy because your present chairman can not longer serve in the capacity of executive of your committee, and can not, therefore, in any sense be a beneficiary of the foregoing recommendations. Respectfully submitted,

CHARLES A. L. REED, *Chairman.*
WM. H. WELCH,
WM. L. RODMAN,

NATIONAL INCORPORATION.

Dr. Reed referred to the matter of national incorporation, which, he said, was not mentioned in the report, as the committee desired further conference and would make a supplementary report later.

ARMY REORGANIZATION BILL.

He said there ought to be adopted a resolution urging prompt action with reference to Army medical reorganization, and as Chairman of the committee he wished to confer with members of the Army medical service.

PURE FOOD AND DRUG BILL.

With regard to the Pure Food and Drug Bill Dr. Reed said:

"No legislator can explain his opposition to the measure on any theory consistent with either intelligence or honesty. This fact becomes all the more important, all the more significant, when the character of the opposition is taken into account, an opposition which, without exception, is made up of people interested in manufacturing and selling rotten and poisonous foods and liquors with which to make the well sick, and adulterated medicines with which to make the sick sicker. These people, the very vultures of society, possessed of enormous sums of ill-gotten money, are organized into a powerful lobby whose methods stop with no scheme of corruption. Their boast, unblushingly made under the roof of the Capitol at Washington, is that they represent over a hundred millions of capital and that the Pure Food and Drug Bill shall not pass. Yet this bill is simply a safeguard such as the government of every other civilized country has provided for the necessary protection of society. There is no doubt but that the people at large demand a reasonable protection to their health and lives. The Senate has passed the bill. There is no doubt but that a large majority of the House favor it if they can only be given a chance to vote on it. Why is this chance not given? Where is the responsibility for the holdup? At this moment it lies between the chairman of the subcommittee having it in charge, the Committee on Rules, and the Speaker—if, indeed, the order ought not to be reversed. The whole House owes it to itself to take the matter by unanimous action into its own hands. Therefore, I ask for the immediate adoption of the following resolutions:

WHEREAS, The revolting methods recently revealed by both private and governmental inquiry to exist in connection with the selection and preparation of meat for the American and foreign markets are a serious menace to the public health, and,

WHEREAS, The impurities demonstrated by government experts and by the Bureau of Chemistry and Pharmacy of the American Medical Association to exist in numerous other food products, in nostrums purveyed to the public and in remedies prescribed to the sick comprise even more serious menaces to the public welfare; therefore, be it

Resolved, That the American Medical Association, with an affiliated membership of more than sixty thousand physicians and representing the organized medical profession in twenty-four hundred of the twenty-eight hundred and thirty counties of the United States, views with satisfaction the efforts of the administration and of the Congress to protect the American public against adulterated foods and impure drugs and to purge our commerce, domestic and foreign, of fraudulent products.

Resolved, That the National House of Representatives be and is hereby earnestly petitioned to place the pending Pure Food and Drug Bill on its passage during the present week.

Resolved, That Honorable W. P. Hepburn, author of the House Bill, be and is hereby requested to lay this petition before the House of Representatives at the earliest practicable moment, and to present a copy of these proceedings to the Speaker of the House and to the Committee on Rules.

Resolved, That the President and Secretary of this Association are hereby instructed officially to telegraph the foregoing preamble and resolutions to Honorable W. P. Hepburn.

NOSTRUMS AND QUACKERY.

Dr. Reed read the following resolutions in regard to quackery and charlatanism:

WHEREAS, The ..... is interested in any endeavor to safeguard and improve the public health and morals, and

WHEREAS, The medical quack and charlatan, by their outrageous practices, are continually robbing their helpless victims and undermining the public health, and

WHEREAS, Many manufacturers of so-called "patent medicines" are debauching the public health and morals by the sale of alcohol and narcotics and many dangerous poisons under the guise of medicines, and by following the most pernicious customs and practices in the conduct of their business and the exploitation of the public, and

WHEREAS, Many manufacturers of drugs and food substances are persistently treating their wares with harmful adulterants and other vicious substances, to the great detriment of health and danger to life, and

WHEREAS, Many newspapers entering American homes contain alluringly false advertisements of adulterated foods and vicious "patent medicines," and criminal quacks and charlatans. Now, therefore, be it

Resolved, By ..... that by reason of the foregoing conditions some concerted action against these evil conditions by public-spirited men and women is necessary for the preservation of the public health and morals and the purity of the American home. Be it further

Resolved, That for the co-ordination and co-operation of the forces willing and able to combat these frightful abuses, the..... does hereby appoint ..... as a delegate to attend a conference of other delegates from other societies and organizations to be held in the City of New York on the 15th of November, 1906, for the purpose of devising ways and means to combat the dangerous attacks now being made from such powerful sources on the public health and morals. Be it further

Resolved, That we approve of the formation of a national Society for the Preservation of the Public Health, whose objects shall be as follows:

(a) To obtain and disseminate accurate information concerning practices and conditions of every kind that are dangerous to the public health and morals, and to work for the enlightenment of the public on all matters affecting these subjects.

(b) To work for the enactment of laws in the United States, Territories and colonial possessions, for the protection and preservation of the public health and morals, including those matters mentioned in subdivision c thereof.

(c) To assist the constituted authorities in the enforcement of all laws affecting the public health, including those laws for the prevention of quackery, charlatanism and criminal practices in the healing art, whether by licensed or unlicensed practitioners; the prevention of adulteration and substitution of drugs and food substances; the prevention of the sale of narcotics, alcohol and dangerous substances of every kind, whether under the guise of proprietary remedies and so-called "patent-medicines" and nostrums and remedies, or whether sold as narcotics in violation of law; the prevention of admission to the United States mails of all newspapers and printed matter of every sort advertising any business injurious to the public health or morals, and to prohibit the advertising of such business in any way. The mention of any one or more particular words or terms in the foregoing paragraph shall not be construed as limiting or qualifying the general terms "public health" or "public morals." Be it further

Resolved, That a copy of these resolutions be furnished the delegate to said conference, and that an additional copy be filed by the delegate with the secretary of the conference of delegates.

Dr. Reed asked that these resolutions be referred at once to the Reference Committee on Medical Legislation and Political Action, with the request that the committee report back to the House of Delegates this afternoon, so that a telegram embodying the resolutions could be sent promptly to the Hon. W. P. Hepburn.

On motion, the report of the committee and resolutions were so referred (see next column).

Report of Committee on Senn Medal.

The report of the Committee on Award of Senn Medal was called for.

Dr. A. F. Jonas, Omaha, Chairman, stated that the committee had only received one paper, consequently it had made no award. The committee submitted its report without definite action.

On motion, the report was adopted.

The reports of the committees on Scientific Research and on Recording the Minutes were called for, and passed in the absence of the chairmen.

On motion, the House of Delegates then adjourned until 2 p. m.

Second Meeting—Monday, June 4

The House of Delegates reassembled at 2 p. m. and was called to order by the President.

The Secretary read the minutes of the previous meeting, which were approved.

Report of Reference Committee on Legislation.

Dr. J. F. Percy, Illinois, Chairman, presented the following report:

The Reference Committee on Medical Legislation and Political Action hereby endorses the preamble and resolutions of the Committee on Medical Legislation and recommends their immediate adoption.

On motion, the recommendations of the committee were concurred in.

Report of the Board of Trustees.

For the Year Ending Dec. 31, 1905.

REFERRED TO COMMITTEE (see page 1873).

Dr. T. J. Happel, Tennessee, presented the report of the Board of Trustees.

To the Officers, the Members, and the House of Delegates of the American Medical Association:

We herewith present our annual report for the current year ending Dec. 31, 1905, as required by our Charter and By-Laws. We desire to make this report so clear that every member, not only of the House of Delegates, but also of the Association, may fully comprehend it.

We present the financial part of the report in the form of the Auditors' report made to the Board after a careful examination of the books, accounts and vouchers of THE JOURNAL office and of the Treasurer of the Association.

EXHIBIT A gives you the letter of the auditing company to the Board of Trustees, calling attention, among other things, to the "Directory Investment," and the net revenue as compared with that of the preceding year.

EXHIBIT B gives you the balance sheet of the Association on Dec. 31, 1905, showing what is called "surplus," and carried forward as such as the basis of the annual report for 1906. This surplus is $237,746.79, as compared with $212,055.18 for Dec. 31, 1904. That account ought to furnish each member of the Association a clear insight into the present status of the Association property on Dec. 31, 1905. In it you will find the value of your real estate and buildings (under-estimated rather than over-estimated), your machinery, furniture and fixtures, bonds, etc.

EXHIBIT C, "Revenue Account as per Books for the Year ending Dec. 31, 1905," shows you the inventory of stock on hand Dec. 31 of that year incurred in "publication" and "general" expenses, showing an aggregate of $249,723.71, and then giving your revenue account itemized, together with your inventory, summing up $275,415.32, the net gain for the year being $25,691.61.

EXHIBIT D shows the "Disposition of Net Revenue for the Year Ending Dec. 31, 1905." From this you will find that your real estate and buildings have increased $21,920.15; your machinery, after deducting "wear," $5,808.75; and that your new account, "Net Investment in Directory," is $10,868.39. You will observe that owing to our new building expense account we have less cash on hand.

EXHIBIT E, Treasurer's Report, shows the money in your Treasurer's hands and the bonds which go to make up the reserve fund of the Association. To this report reference will be made later. Suffice it to say here that you own bonds which cost $40,199.39, the par value of which is $39,000.

The exhibits are worthy of the careful study of every officer and member of the Association.

EXHIBIT F is a comparison of some of the larger items of revenue for the year 1905 with those of 1904, given by the Board, not being the work of the auditing company.

EXHIBIT G, appended to this report, is the "Report of the Council on Pharmacy and Chemistry," made to the Board of Trustees of the American Medical Association at their meet-

ing Feb. 2 and 3, 1906. Although this report has been published in THE JOURNAL, we feel that a matter of so much importance will bear repetition and re-reading.

These examinations are made by a paid auditing company which has no interest in misrepresenting anything. The business of the Association has grown to such an extent that we feel that this is the only business-like method of procedure.

The following is a copy of the Auditors' report:

EXHIBIT A.

THE INVESTORS' AUDIT COMPANY.

CHICAGO, JAN. 31, 1906.

To the Board of Trustees of the American Medical Association, Chicago.

Gentlemen:

In accordance with your instructions, we have examined the books and vouchers of the American Medical Association for the year ending Dec. 31, 1905, and hand you herewith the following statements:

Balance Sheet as at Dec. 31, 1905.
Revenue Account for the year ending Dec. 31, 1905.
Disposition of Net Revenue for the year ending Dec. 31, 1904.

The Association, following its usual custom, has charged against the profits a liberal reserve for depreciation of new building, machinery and furniture and fixtures.

During the year there have been several important improvements made, consisting of a large addition to the building occupied by the Association, considerable new printing equipment, and the equipment of the extension with fixtures, etc.

We would call your attention to an item shown on the balance sheet: "Net Investment in Directory to date $10,858.39."

This is made up as follows.

Cost of directory property		$ 6,035.50
Expenditures for salaries, labor and material in preparing first edition		5,042.89
		$11,078.39
Less:		
Directory advance sales	$165.00	
Directory advance advertisements	45.00	210.00
		$10,868.39

We are informed that the first edition of the Directory published by the Association will not appear until about June 1, 1906. Therefore, it is proper to carry the expense incurred as an asset until such time as an income from the Directory shall be realized.

The net revenue, as shown in our last report for the year ending Dec. 31, 1904, was	$43,465.03
And for the year ending Dec. 31, 1905, as per account annexed	25,691.61
Or a decrease of	$17,773.42

We shall be glad to report in detail on this decrease if you desire.

We have examined, properly approved and receipted vouchers for all expenditures, with the exception of a few which had not been returned by the bank at the time of our visit. We shall audit same on our next visit to the office of the Association. We counted the cash on hand and verified the cash in bank with statements furnished us by the bankers. The securities in possession of the Trust Company were examined and found to be intact. In addition to the above, we have verified the footings of the cash book and made such other checks as in our opinion were deemed necessary for the protection of the Association.

Considering the amount of detail handled by the Accounting Department, we found the work to be in excellent condition. There appears to be a continued improvement in the manner of handling the accounts and office work.

We will be pleased to furnish you with any other information that you may desire. Yours faithfully,

E. M. MILLS, Manager.

EXHIBIT B.

BALANCE SHEET AS AT DEC. 31, 1905.

ASSETS.

Real estate and buildings		$114,323.61
Machinery		33,422.45
Furniture and fixtures		5,341.29
Library		1,163.11
Net investment in Directory to date		10,868.39
Inventory of paper stock, type, metal, buttons, ink and fuel		7,167.57
Bonds		40,199.38
Bills receivable		60.00
Accounts receivable		15,.052.28
Cash on hand and in bank		19,884.83
		$247,482.91

LIABILITIES.

Accounts payable		$9,596.12
Section reports paid for in advance		140.00
Surplus: Balance as at Jan. 1, 1905	$212,055.18	
Add: Net revenue for the year, as per account annexed	25,691.61	237,746.79
		$247,482.91

EXHIBIT C.

REVENUE ACCOUNT AS PER BOOKS FOR THE YEAR ENDING DEC. 31, 1905.

Inventory of paper stock, type, metal and buttons as at Jan. 1, 1905		$5,347.65
PUBLICATION EXPENSES:		
Paper	$62,843.16	
Ink	2,955.04	
Type, metal electros	4,222.40	
Salaries and pay roll	78,874.79	
News reporting and editorials	9,417.67	
Binding	877.48	
Machinery repairs and renewals	2,068.61	
Advertising and subscription commissions	10,305.24	
Postage, first and second class	21,059.16	
Power, fuel and light	4,350.86	
General expense	2,432.48	
Exchange	556.05	
Collection fees	1,314.08	
Factory supplies	1,763.82	
Office jobbing	1,843.90	
Advertising and transportation	3,160.83	
Express and cartage	1,499.24	
Miscellaneous losses less recoveries	1,354.25	
Discount and interest	1,009.42	
Depreciation of machinery, furniture and fixtures	3,891.17	215,797.25
GENERAL EXPENSES:		
Organization	$7,797.04	
Association	10,062.30	
Medical legislation	1,234.90	
Council on Medical Education	639.43	
Council on Pharmacy and Chemistry	1,862.80	
Buttons	812.76	
Buildings	2,203.00	
Insurance and taxes	1,704.96	
Commissions for securing new members (buttons)	519.50	
Depreciation of buildings	1,742.32	28,578.81
Net revenue for the year ending December 31, 1905		25,691.61
		$275,415.32
Advertising		$95,600.36
Subscriptions collected during the year		64,242.46
Membership dues collected during the year		83,409.15
Jobbing		9,608.40
Reprints		5,916.91
Books		3,498.38
Buttons		927.81
Rents of Association properties		3,447.04
Miscellaneous receipts		37.24
Interest on bonds		1,560.00
Inventory of paper stock, type, metal, buttons, ink and fuel as at Dec. 31, 1905		7,167.57
		$275,415.32

EXHIBIT D.

DISPOSITION OF NET REVENUE FOR THE YEAR ENDING DEC. 31, 1905.

INCREASE IN ASSETS:		
Real estate and buildings	$21,920.15	
Machinery	5,808.75	
Furniture and fixtures	1,461.81	
Library	154.61	
Inventories	1,819.92	
Accounts receivable	954.99	
Net investment in Directory	10,868.39	$42,988.62
DECREASE IN LIABILITIES:		
Section reports paid for in advance	$139.00	$43.127.62
DECREASE IN ASSETS:		
Bills receivable	$65.73	
Cash	8,910.21	$8,975.94
INCREASE IN LIABILITIES:		
Accounts payable	$8,460.07	$17,436.01
Net revenue for the year ending Dec. 31, 1905, as per account annexed		$25,691.61

EXHIBIT E.

REPORT OF THE TREASURER FOR THE YEAR ENDING DEC. 31, 1905.

RECEIPTS.

1905.	
Jan. 1—Cash balance in bank	$22,354.24
Feb. 1—Cash received from editor of JOURNAL	10,000.00
July 1—Cash received from editor of JOURNAL	5,000.00
Interest coupons on 39 $1,000 bonds, 4 per cent.	1,560.00
Interest, 2 per cent., on daily cash balance in bank from Dec. 1, 1904, to Nov. 30, 1905	524.62
	$39,438.86

DISBURSEMENTS.

1905.	
Sept. 1—Cash paid editor of JOURNAL on order of Trustees (for building)	$10,000.00
Sept. 1—Fee paid First Trust and Savings Bank by Treasurer to care for bonds and cut coupons for a period of one year	30.00
Sept. 1—Placed on special deposit for six months at 3 per cent. by order of local Trustee	15,000.00
Nov. 16—Cash paid editor of JOURNAL on order of Trustees (for building)	10,000.00
Dec. 31—Cash balance in bank	4,408.86
	$39,438.86

PROPERTY OF AMERICAN MEDICAL ASSOCIATION IN HANDS OF TREASURER, JAN. 1, 1906.

Cash in First National Bank, Chicago			$4,408.86
Certificate of deposit at 3 per cent in First Trust and Savings Bank			15,000.00
	Cost.	Par value.	
5/1000 bonds Union P., 1st 4's.	$5,207.50	$5,000.00	
5/1000 bonds Erie Ry. Co., 1st 4's	4,932.50	5,000.00	
5/1000 bonds Reading General, 1st 4's	4,870.00	5,000.00	
14/100 Chicago City School bonds, 4's	15,168.13	14,000.00	
5/1000 bonds A. T. & S. Fe, 4's	4,988.75	5,000.00	
5/1000 bonds B. & O., 1st 4's.	5,032.50	5,000.00	
	$40,199.38	$39,000.00	$39,000.00
			$58,408.86

Very respectfully submitted.

FRANK BILLINGS, Treasurer.

EXHIBIT F.

Amount received from—	1905.	1904.	Gain.
Membership dues	$84,409.15	$74,123.04	$10,286.11
Subscriptions	64,252.46	60,742.22	3,506.24
Advertisements	95,600.36	94,945.60	654.76
Rents	3,447.04	2,744.34	702.70
Interest on bonds	1,560.00	1,160.00	400.00
Daily balances	524.63	.....	524.63
Inventory	7,167.57	5,347.65	1,819.92
	$256,961.21	$239,062.85	$17,888.12

A glance at the above table shows from whence has come the larger portion of our profits.

ADVERTISING DEPARTMENT.

The receipts from advertising last year (1905) were $95,600.36—showing a net gain over 1904 of $654.76, but it must be remembered that this gain was made in spite of the fact that in 1904 $15,000 of advertising matter was either rejected or discontinued from THE JOURNAL, and in 1905 at least $10,000 more was rejected, making in all $25,000. The higher rates obtained alone saved us from showing a decrease from this source. A further loss will no doubt result in 1906, from the application of the Rules of the Council on Pharmacy and Chemistry. The Editor and General Manager estimates that the gross loss may amount to nearly $20,000. As the circulation of THE JOURNAL increases, however, its advertising pages become more valuable to ethical advertisers and new matter will take the place of much that has been eliminated by the expiration of contracts, etc. In fact, to sum up the whole matter, your Board of Trustees and your Editor intend to free the pages of THE JOURNAL from everything about which any question can be raised. A glance at the advertising pages of THE JOURNAL shows even now a long stride in that direction.

At the present time things are in a very chaotic condition as regards what is acceptable and non-acceptable advertising for the reason that the Council on Pharmacy and Chemistry has many preparations under consideration, and whether they will be finally recognized as acceptable, depends on the result of the deliberation of the Council. We believe, however, that when this matter has been thoroughly worked out and we get on a solid basis, we shall be able to make up for lost advertising by getting a larger patronage from the more reputable houses. As the circulation of THE JOURNAL increases it becomes more valuable as a medium for general advertisers, not necessarily medical, and these advertisers we think will soon begin to realize it.

By far the greatest number of members and subscribers is obtained by representatives calling on the profession. Over 6,000 names were secured from this source. These special representatives not only secure orders, but some of them are doing excellent work building up the organization and calling attention to its benefits.

Of course, our loss each year is great, and the larger the number of subscribers and members, the greater the loss. There is no way of estimating the loss from deaths and retirement on account of old age, but the number is not inconsiderable. A considerable number, of course, are dropped for nonpayment of dues or subscription, besides those who voluntarily give up their membership or subscription from various causes.

CIRCULATION.

The weekly issue of THE JOURNAL of the American Medical Association from Jan. 7, 1905, to Dec. 30, 1905, inclusive, 52 issues, was as follows:

1905.	Weekly Edition.		1905	Weekly Edition.		
Jan. 7	35,319		July 1	39,182		
Jan. 14	35,291		July 8	39,196		
Jan. 21	35,325		July 15	37,325		
Jan. 28	35,240		July 22	37,006		
		141,175	July 29	37,519		190,228
Feb. 4	35,351					
Feb. 11	35,345		Aug. 5	37,270		
Feb. 18	35,244		Aug. 12	37,250		
Feb. 25	35,410		Aug. 19	40,449		
		141,350	Aug. 26	37,455		152,424
March 4	35,434					
March 11	35,447		Sept. 2	37,654		
March 18	35,517		Sept. 9	37,316		
March 25	35,715		Sept. 16	37,407		
		142,113	Sept. 23	37,589		
April 1	35,976		Sept. 30	37,334		
April 8	36,107					187,300
April 15	38,279		Oct. 7	37,800		
April 22	38,344		Oct. 14	37,958		
April 29	38,392		Oct. 21	40,023		
		187,098	Oct. 28	38,100		153,881
May 6	38,381					
May 13	38,518		Nov. 4	39,446		
May 20	38,603		Nov. 11	40,416		
May 27	38,626		Nov. 18	41,736		
		154,128	Nov. 25	41,785		163,383
June 3	40,334					
June 10	37,964		Dec. 2	42,487		
June 17	38,317		Dec. 9	42,067		
June 24	38,212		Dec. 16	42,527		
		154,287	Dec. 23	40,628		
			Dec. 30	40,700		208,409
Grand Total		1,976,316	Weekly Average			38,006

The total number of copies issued during 1905 was 1,976,316.

The total number of copies issued during 1904 was 1,718,402.

An increase of 257,914, or 15 per cent.

The following is a detailed count of mailing list of members and subscribers by states on Jan. 1, 1906. It also indicates the loss or gain in each state during 1905. Copies to the U. S. Army, Marine-Hospital Service, etc., omitted:

State.	Members.	Subscribers.	Totals.	Gain for Year.	Loss for Year.
Alabama	229	198	427	89	...
Arkansas	287	199	486	36	...
Arizona	50	40	90	26	...
Alaska	4	...	4	2	...
California	904	559	1,463	268	...
Colorado	383	233	616	78	...
Connecticut	312	221	533	96	...
Delaware	38	13	51	5	...
Dist. of Columbia	216	201	417	25	...
Florida	142	122	264	82	...
Georgia	225	212	467	64	...
Idaho	78	47	125	33	...
Illinois	1,944	1,867	3,811	479	...
Indiana	743	774	1,517	138	...
Indian Territory	60	106	166	21	...
Iowa	724	663	1,387	...	64
Kansas	311	405	716	127	...
Kentucky	464	430	894	158	...
Louisiana	373	230	603	...	71
Maine	175	112	287	9	...
Maryland	375	366	741	122	...
Massachusetts	929	736	1,665	489	...
Michigan	762	686	1,448	...	74
Minnesota	669	335	904	158	...
Missouri	681	776	1,457	151	...
Mississippi	220	238	458	71	...
Montana	101	70	171	41	...
Nebraska	340	272	612	30	...
Nevada	22	27	49	13	...
New Hampshire	168	52	220	9	...
New Jersey	512	262	774	78	...
New Mexico	61	43	104	36	...
New York	1,064	1,749	2,813	785	...
North Carolina	134	123	257	38	...
North Dakota	105	144	249	92	...
Ohio	1,306	1,045	2,351	496	...
Oklahoma	96	111	207	18	...
Oregon	243	115	358	120	...
Pennsylvania	2,203	953	3,156	253	...
Rhode Island	153	32	185	...	10
South Carolina	133	130	263	58	...
South Dakota	133	125	258	61	...
Tennessee	350	260	610	...	14
Texas	649	511	1,160	98	...
Utah	85	56	141	17	...
Vermont	139	50	189	9	...
Virgina	255	232	487	...	13
Washington	299	233	532	183	...
West Virginia	234	184	418	68	...
Wisconsin	682	520	1,202	197	...
Wyoming	31	31	62	11	...
Canada	9	152	161	19	...
Cuba	2	7	9	...	...

State.	Members.	Sub-scribers.	Totals.	Gain for Year.	Loss for Year.
Hawaiian Islands	15	13	28	9	...
Mexico	14	32	46	6	...
Philippine Islands	26	18	44	15	...
Porto Rico	5	13	18	10	...
Isthmus Panama	4	8	12	12	...

The figures below indicate the count of the mailing list, Jan. 1, 1906, compared with that of Jan. 1, 1905:

	Jan. 1, 1905.	Jan. 1, 1906.
Copies to members	17,570	20,826
Copies to subscribers	15,698	17,669
Copies to exchanges	178	216
Copies to advertisers	248	310
Copies to medical colleges and libraries	98	114
Copies to subscription agents	90	96
Complimentary copies to members of Council on Pharmacy and Chemistry, etc.	.....	30
	33,882	39,261

This shows an increase of 5,379.

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL.

This table gives the number of physicians (based on Polk's and Standard directories, 1904 editions) in each state, and the number receiving THE JOURNAL and the percentage in each state. Copies to physicians in the U. S. Army, Marine-Hospital Service, etc., are omitted.

State	Physicians in State.	Number receiving Journal.	Approximate Per cent.
Alabama	2,114	427	20.1
Arkansas	2,382	486	20.4
Arizona	210	90	42.8
Alaska	55	4	7.2
California	3,921	1,463	37.3
Colorado	1,506	616	40.9
Connecticut	1,361	533	39.1
Delaware	227	51	22.4
District of Columbia	1,030	417	40.4
Florida	660	264	40
Georgia	2,769	467	16.8
Idaho	227	125	55
Illinois	8,517	3,811	44.7
Indiana	4,902	1,517	30.9
Indian Territory	801	166	20.7
Iowa	3,791	1,387	36.5
Kansas	2,566	716	27.8
Kentucky	3,387	894	26
Louisiana	1,462	603	41.2
Maine	1,229	287	23.3
Maryland	1,922	741	38.5
Massachusetts	5,150	1,665	32.3
Michigan	4,274	1,448	33.8
Minnesota	1,960	904	46.1
Missouri	6,089	1,457	25.2
Mississippi	1,663	458	27.5
Montana	356	171	48
Nebraska	1,647	612	37.1
New Hampshire	705	220	31.2
Nevada	84	49	58.3
New Jersey	2,302	774	33.6
New York	13,316	2,813	21.1
North Carolina	1,607	257	15.9
North Dakota	340	249	73.2
New Mexico	203	104	51.2
Ohio	8,112	2,351	28.9
Oklahoma	1,027	207	20.1
Oregon	692	358	51.7
Pennsylvania	9,714	3,156	32.5
Rhode Island	680	185	27.2
South Carolina	1,160	263	22.7
South Dakota	523	258	49.3
Tennessee	3,430	610	17.7
Texas	4,935	1,160	23.5
Utah	301	141	46.9
Vermont	701	189	26.9
Virginia	2,063	487	23.1
Washington	910	532	58.4
West Virginia	1,410	418	29.6
Wisconsin	2,500	1,202	48.1
Wyoming	133	62	46.6

The following table shows the number of members and of subscribers for each year, commencing with 1899, at about which time our present editor took charge of THE JOURNAL:

	Members.	Subscribers.
Jan. 1, 1899	7,997	2,453
Jan. 1, 1900	8,445	4,633
Jan. 1, 1901	9,841	8,339
Jan. 1, 1902	11,107	10,795
Jan. 1, 1903	12,553	12,378
Jan. 1, 1904	13,899	14,674
Jan. 1, 1905	17,570	15,698
Jan. 1, 1906	20,826	17,669

It will be noticed from the above that the membership increased 3,256, but most of these were in the "subscribers" column last year and were transferred to membership during the past year.

This last table presented shows that not enough members of the various state societies are becoming members of the American Medical Association. There are only 3,157 more members than subscribers, showing plainly that many who could become members are not availing themselves of the privilege so to do. In Alabama, for example, 229 of her 2,114 physicians are members of the American Medical Association and receive THE JOURNAL as members, while there are 198 non-members who are subscribers to THE JOURNAL. Tennessee, with her 3,430 physicians, shows only 350 members to whom THE JOURNAL is sent as such, and 260 who take it as subscribers; North Dakota leads all the states in percentage of her physicians who get THE JOURNAL—this being 73.2 per cent.; Washington next with 58.4 per cent.; coming on down to North Carolina with 15.9 per cent. and Alaska with 7.2 per cent. The sparsely settled western states show the greatest appreciation of the efforts of the American Medical Association to furnish a first-class medical journal by heartily supporting it—the lowest percentage being Nebraska, with 37.1 per cent., and the highest being North Dakota with her 73.2 per cent. This is easily accounted by the fact that, outside of the cities, the physicians are so far removed from each other that they are forced to depend on themselves and on the best literature that they can obtain; hence they take THE JOURNAL.

Work done among the physicians by canvassing agents on this point would accomplish much good. They would reach more of the country physicians, who constitute the majority of the practitioners in every state, and could easily induce all who are members of the state society to subscribe for THE JOURNAL. In our opinion much growth in membership must be made through direct contact with the members of the county societies; and frequently the canvasser will be able to induce a physician subscribing for THE JOURNAL to become a member of the county society, which makes him a member of his state society, and hence eligible for membership in the American Medical Association.

PAPER STOCK.

The Editor reports to us that he was able, last November, to make the best contract for paper for 1906 that he has ever made. This is due to the fact that the paper required for THE JOURNAL is a very large order, and is sought after by many mills, which can make it at their convenience, and which is paid for as delivered.

The following table gives the amount of paper stock used, in reams, pounds and tons, and is merely carrying on the statement made to you in previous reports:

	Reams.	Lbs. of paper.	Tons.
1898	3,395	321,525	157
1899	4,832	461,420	230
1900	6,747	607,230	303.5
1901	9,052	814,680	407
1902	10,230	938,700	469.3
1903	12,368	1,113,100	586.5
1904	14,399	1,295,910	648
1905	17,783	1,576,530	788

MACHINERY.

During the year we bought another linotype machine. In the very near future a new printing press, modern in every respect, will have to be bought.

INCREASED EXPENSES.

We submit below the various tables illustrating the gradual increase in expenses. This is merely a continuation of the tables of previous years and shows how rapidly this account grows as the number of copies of THE JOURNAL increases.

PAY ROLL AND SALARY.

1899	$31,448.69	1903	$57,067.34
1900	37,359.49	1904	64,471.26
1901	40,416.01	1905	78,874.79
1902	46,316.65		

PAPER STOCK.

1900	$25,598.00	1903	$43,966.57
1901	29,835.00	1904	51,190.05
1902	35,675.06	1905	57,526.69

POSTAGE ON JOURNAL.

1899	$3,905.65	1903	$9,828.41
1900	5,616.06	1904	11,773.44
1901	7,591.37	1905	14,360.28
1902	8,595.63		

INK.

1899	$718.44	1903	$2,055.95
1900	1,145.45	1904	2,225.58
1901	1,753.31	1905	2,765.64
1902	1,930.65		

DIRECTORY.

The Secretary, Dr. Simmons, presents to us the following report in regard to the Directory:

"The editorial work on the Directory is in charge of Dr. Frederick R. Green. The publication of such a directory by the Association has been considered from the first years of the organization of the Association. On several occasions the Association has voted to establish such a Directory and has even appointed committees with full power to act, but owing to the lack of funds and of an organization sufficiently adequate, nothing was accomplished. It will be remembered that the report of the Committee on Organization, adopted at St. Paul, mentioned the Directory as one of the objects to be accomplished by an organized profession.

"The fundamental and most important work has been that of securing an official list of those legally entitled to practice medicine in each state, i. e., those who hold a license from the licensing board. As there are 52 states and territories with 70 licensing boards, the amount of work along this line has necessarily been very large, but it must be remembered that it will not have to be done hereafter. The Association now has a list recorded on the card-index system of the legally qualified physicians of the United States. Arrangements have been made with each of the licensing bodies to keep this information up to date by furnishing a list of newly licensed physicians, subsequent to each examination. The secretaries of the licensing boards have heartily and enthusiastically aided in the work and deserve the thanks of the Association.

"In some of the states, owing to the unsatisfactory condition of the records, it has been exceedingly difficult to obtain the desired information. In Pennsylvania, for instance, there is no complete list of legally qualified physicians in the hands of any of the state boards. The present medical practice law requires registration in the office of the county clerk. It was, therefore, necessary to obtain a copy of the list of registered physicians from the prothonotaries of the 67 counties in Pennsylvania. In New Jersey the same procedure was necessary, owing to the fact that the medical practice act in force from 1880 to 1890 only required registration in the county clerk's office. This necessitated obtaining transcripts of the records from each of the 21 county clerks, in addition to the list of the secretary of the State Board of Medical Examiners, of physicians licensed from 1880 to date. In Texas, the fact that four successive practice acts have been in force during the last 20 years, each one with different requirements regarding registration, as well as the vast size of the state and the fact that the profession is widely scattered, made it difficult to compile an accurate list of practitioners. This problem has been solved in a more or less satisfactory manner, however.

"It should be constantly borne in mind that the Directory will be a compilation of only a portion of the personal and professional information contained in the biographical card index. It is manifestly impossible, owing to lack of space, to publish full and complete information regarding each physician. All the data obtained, however, is made a matter of permanent record and is preserved in the card records. We have now on file over 50,000 personal information blanks, beside large amounts of data obtained from medical colleges, societies, etc. As stated above, the most important work is the compilation of a list of legally qualified physicians. The result of this work has been that, in nearly all the states, the secretaries have realized more than ever before the importance of accurate registration. The Association is co-operating with them in this effort and, in some instances, will probably print alphabetical rosters for individual state boards. The value to the boards themselves, is that all of the information on file at this office is placed at their disposal.

"Medical college statistics have been secured in the same manner. We have obtained a list of graduates for the years 1902, 1903, 1904 and 1905 from every medical college now in existence with the exception of two. This completes and brings up to date the list of college graduates already in our possession. Arrangements have been made with the medical colleges to supply us with a list of graduates each year. Thus we shall have a list of those licensed in each state and a list of graduates of all schools.

"At this time—May 15—the matter for 35 of the states is in type. The preliminary matter, including medical practice laws, state boards, officers of the county and state medical societies, medical colleges, etc., is complete and in type for all states."

BUILDING.

The addition to THE JOURNAL building, when completed, as suggested in the annual report made at Portland, increased the floor space about 50 per cent. For the present there is no crowding and work can be carried on much more rapidly and conveniently. The fourth story has been left without partitions, which will be put in as needed, under the supervision of the resident Trustee and the Editor and General Manager, Dr. Simmons. At the February meeting of the Board of Trustees they were directed to arrange for the installation of a chemical laboratory outfit on this floor. Reference will be made to this matter again under the head of appropriations. Until this fourth floor is partitioned off, the room called the Library, and used also as a meeting place for the Board of Trustees, is utilized for various purposes. There will soon be no spare space in the building if the business grows as it has in the years 1904 and 1905. In using the term "building," reference is made to THE JOURNAL home alone. The balance of the property is spoken of as real estate.

REAL ESTATE.

You have, in addition to THE JOURNAL office, five houses—two of three stories and basement and three of two stories and basement. These have all been kept in first-class repair. Three of these houses front on Dearborn Avenue and two on Indiana Street. The double house on Indiana Street has been continuously rented during the past year for $130 a month. The corner house on Dearborn Avenue is renting for $60 a month, and the two next to this building are now rented to one party at $80 per month, making a total of $270 per month for rents. The gross income from this source was $3,447.04. The excess of receipts as given in the total amount is accounted for by the fact that the agents who originally looked after the matter always kept back a month's rent, which was paid in full last March at the time the management of the property was taken on by THE JOURNAL office.

Assuming that the cost of the property occupied by the houses is three-fifths of the original cost, we should estimate its value as being $34,558.26, which will make a net income of 3.3 per cent.

To show more plainly the conservatism of our auditing company, your attention is called to Exhibit C, where there is charged against the Association "Depreciation of buildings, $1,742.32." This is a charge that is made under their business rules, while the whole real estate is worth more than it originally cost the Association.

PROFITS.

The profits from the business for the year 1905 are $17,773.42 less than last year. Perhaps an explanation of this decrease is due the House of Delegates and the Association. The receipts from dues for 1904 were abnormally large by reason of a special offer made in September of that year, and continued to the end of the year to send THE JOURNAL from date of subscription or application for membership until Dec. 31, 1905. By virtue of this offer 1,100 new members paid their 1905 dues in 1904, increasing the receipts of 1904 by $5,500, which could be properly deducted from the receipts of 1904 and added to those of 1905, thus making a difference of $11,000. Again the expiration of the contracts of many medical advertisements in 1905, which could not be renewed for the present, has been another source of loss of revenue. The estimated value of these advertisements, together with those rejected, as stated elsewhere, amounts to about $10,000. Thus it can be readily

seen that the difference in profits can be accounted for. This shrinkage may continue through another year, but it is expected that all rejected ads will soon be replaced by others to which no objection can be offered.

As stated in each of our previous reports, the true profits of THE JOURNAL should be kept separate and distinct from the profits of the Association, for the reason that the expenses incurred by the Association are liable to vary greatly in different years. The Association expenses for 1905 exceeded those for 1904 by $4,172.70. This is offset to a slight extent by an increase in receipts from interest on bonds, $400, and from rents, $702.70, a total of $1,102.70. This, therefore, will account for a decrease in profits of about $3,000.

We can estimate the approximate profits of THE JOURNAL as follows:

Association net profits	$25,391.61	
Association expenses	21,596.27	
Journal profit		$47,287.88
Interest	$2,057.54	
Rents	1,466.75	3,524.29
		$43,763.59

The following table shows the profits made by THE JOURNAL, the true profits of the Association for several years, as well as the net revenue to the Association from THE JOURNAL, from rents and from interest:

	ASSOCIATION INCOME.			Association expenses.	True profits.
	Journal.	Rents.	Interest.		
1899	$22,451.24	.....	.....	$ 5,843.39	$16,616.85
1900	21 984.79	.....	.....	7,182.57	14,802.22
1901	36 245.60	.....	.....	10,227.49	26 018.11
1902	46 096.05	.....	.....	5,955.49	40 140.56
1903	50,481.33	$1,400.34	$ 560.00	11,952.99	40 488.68
1904	57,002.22	1,195.31	1,295.82	16,028.32	43,465.03
1905	43,763 59	1,466,75	2,057.54	21,596.27	25.691.61

Thus, the Association has three sources of income. THE JOURNAL, rents and interest on bonds. The total of these, minus the Association expenses, gives the true profits of the Association.

There has been a gradual increase of the wages paid all the employés of THE JOURNAL. The union scale of wages has to be complied with to avoid trouble in having our work done, and as in every other line of business, skilled labor commands better prices, commensurate with the increased cost of living.

APPROPRIATIONS.

The appropriations for 1905 exceed those of 1904 by nearly $4,000.

The following appropriations were made:

$100 to the Committee on International Congress of Medicine.

$300 to the Committee on Scientific Research.

$250 honorarium allowed Dr. F. B. Wynn.

$600 was appropriated for the payment of secretaries of sections.

$500 was appropriated for Scientific Exhibit.

$1,000 was appropriated for Committee on Medical Legislation.

$300 was appropriated for Committee on Reciprocity.

As much of $4,000 as might be needed by the Council on Medical Education. Of this amount $639.43 had been used up to Dec. 31, 1905.

A few other appropriations made at the February meeting of the Board will be reported for 1906. The appropriation of $2,000 for the installation of a Chemical Laboratory is the chief one agreed on for 1906. In the opinion of your board much thorough work can be done here in aiding the Council on Pharmacy and Chemistry. The chemist to be employed here will act as secretary to the Council. Out of the appropriations a room is to be cut off and properly equipped with necessary laboratory supplies.

INVESTMENTS.

In view of the expliciteness of the Treasurer's report, little need be said on this subject. We have, as he shows plainly, bonds with a par value of $39,000, bearing interest at the rate of 4 per cent., and a special deposit of $15,000 to be used in procuring as nearly as possible $15,000 of similar bonds when the market becomes suitable for the purchase. Up to the time of writing this report the market has been too high to enable the Association to realize 4 per cent. on the investment. But while this $15,000 is a special deposit, it is drawing interest at the rate of 3 per cent. per annum. We have now, as you see, a reserve fund of $54,000, just about one-third the amount needed to place THE JOURNAL on a rock-bottom foundation. No encroachment should be made on this fund; on the contrary, it should steadily be made to grow each year, till it has reached $150,000. Until then, there should be no listening to any suggestion of a reduction in membership fees or subscription rates.

BOOK-KEEPING, ETC.

The Audit Company reports (Exhibit A) that all the work was found in excellent condition, with "a continued improvement in the manner of handling the accounts and office work." All your property is kept insured and taxes paid. Your officers are all bonded in solvent bonding companies.

NATIONAL INCORPORATION.

Your board is informed by Dr. Charles A. L. Reed that further efforts to obtain a National Charter that would enable the Association to do business anywhere in the United States will be abandoned, as Congress could not grant such a charter. A charter secured through Congress would be limited in its powers by the laws, etc., governing the District of Columbia. We would recommend that no more money be expended along that line.

PLACE OF SESSION, EXHIBITS, ETC.

Your board has not been able to assume full responsibilities connected with the place of session, quarters for section meetings, railroad rates, etc., but if the amendments recommended for passage are carried, then we will feel the responsibility resting on our shoulders. This year that burden is borne by the local Committee on Arrangements.

FINALLY.

We hope that the work of your board, as set forth in this report, can be fully understood, and that whatever criticism may be indulged in may be not of an iconoclastic nature, but with a view to aiding us in our work. The work has been done. "Judge ye" not in a carping spirit, but with malice toward none. Of course, we have incurred the hostility of those firms and parties whose advertisements have been refused, but in each case an honest effort has been made to comply with what we have understood to be the expressed wish of the Association.

We would ask that the House of Delegates extend to Dr. George H. Simmons, Editor and General Manager, a most hearty vote of thanks for his year's work for the Association. Money paid for services rendered is not always a *quid pro quo*, thanks extended frequently being as much estimated.

We attach as Exhibit G the report of the Council on Pharmacy and Chemistry, submitted to the Board at its meeting in February, to which we invite your attention. We are glad to announce that through the courtesy of Surgeon-General Wyman and the Secretary of the Treasury, Dr. Reid Hunt, who is connected with the hygienic laboratory of the United States Public Health and Marine-Hospital Service, is now a member of the Council on Pharmacy and Chemistry. He takes the place of Professor Cushney, who, as will be remembered, was compelled to resign his active connection with the Council through his transfer to the Medical Department of the University of London, England. In addition, it is the intention to examine in the Hygienic Laboratory, from time to time, such proprietary and "patent" medicines as may be deemed advisable in the interest of the public health. We feel sure that you will join with your Board of Trustees in extending thanks to Surgeon-General Wyman for his assistance in this matter.

WILLIAM H. WELCH, M. L. HARRIS, Secretary.
W. W. GRANT, A. L. WRIGHT.
MILES F. PORTER, PHILIP MARVEL,
H. L. E. JOHNSON, T. J. HAPPEL, Chairman.
E. E. MONTGOMERY, Vice-Chairman

EXHIBIT G.

Report of the Council on Pharmacy and Chemistry.

The following report was presented to the Board of Trustees of the American Medical Association at its meeting held Feb. 2-3, 1906:

To the Board of Trustees of the American Medical Association.

Gentlemen:—We beg to make the following report:

A conference of the Council on Pharmacy and Chemistry was held at Cleveland, Sept. 11-12, 1905, to which certain manufacturing pharmaceutical and chemical houses were invited to send representatives, as the Council desired suggestions and criticisms regarding the general plan of the work. Several physicians were also invited. The rules were thoroughly considered and finally adopted in the revised form as follows:

(The term "article" shall mean any drug, chemical or similar preparation used in the treatment of disease.)

RULE 1.—No article will be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article be furnished for publication. The general composition of the vehicle, its alcoholic percentage, if any, and the identity of other preservatives, if present, must be furnished.

RULE 2.—No chemical compound will be admitted unless sufficient information be furnished regarding tests for identity, purity and strength, the rational formula or the structural formula, if known.

RULE 3.—No article that is advertised to the public will be admitted; but this rule will not apply to disinfectants and food preparations, except when advertised in an objectionable manner.

RULE 4.—No article will be admitted whose label, package or circular accompanying the package contains the names of diseases, in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated. (This rule does not apply to literature distributed solely to physicians, to advertising in medical journals, or to vaccines and antitoxins.)

RULE 5.—No article will be admitted or retained concerning which the manufacturer, or his agents, make false or misleading statements as to geographical source, raw material from which made, or method of collection or preparation.

RULE 6.—No article will be admitted or retained of which the manufacturer or his agents make unwarranted, exaggerated or misleading statements as to therapeutic value.

RULE 7.—Labels on articles containing "poisonous" or "potent" substances must show the amounts of each of such ingredients in a given quantity of the product. A list of such substances will be prepared.

RULE 8.—If the trade name of an article is not sufficiently descriptive of its chemical composition or pharmaceutical character, or is, for any other reason, objectionable, the Council reserves the right to include with the trade name a descriptive title in the book. Articles bearing objectionably suggestive names will be refused consideration.

RULE 9.—If the name of an article is registered, or the label copyrighted, the date of registration and a copy of the protected label should be furnished the Council. In case of registration in foreign countries, the name under which the article is registered should be supplied.

RULE 10.—If the article is patented—either process or product—the number and date of such patent or patents should be furnished.

The proposed book, "New and Non-Official Remedies," was also discussed, and it was tentatively agreed that it should be divided into two parts: Part I to consist of definite chemical compounds and simple pharmaceutical preparations, and Part II to comprise pharmaceutical mixtures. The plan of procedure referred to in the previous report was slightly elaborated. Since the conference the Council has considered the merits of various proprietary articles and has provisionally arranged and classified a large number of preparations which are considered worthy of recognition.

As indicated in the first report, the consideration of pharmaceutical mixtures—the vast majority of preparations belong to this class—proved a most difficult problem. Such a preparation is usually an ordinary mixture, made according to some physician's prescription, or after some well-known formula, modified in some way to disguise its identity, which has been placed on the market as a new preparation under a catchy or suggestive name, accompanied with extravagant therapeutic claims. Such preparations represent nothing new and involve no unusual skill in their manufacture. Their use is to be deplored, but if they are to be used a complete statement regarding their composition should be furnished to physicians. If this were done, and if all mystery regarding them were removed, their use would be very limited. It has been decided, however, that as many of these mixtures as conform to the rules will be placed in Part II of the proposed Annual, where, when similar, they will be grouped together and explicit reference be made to corresponding official preparations.

In this connection, however, it should be borne in mind that standard preparations, such as those in the Pharmacopeia and in the National Formulary—fully equal, if not superior, to the proprietary mixtures—are not only listed in the catalogues of the manufacturing pharmacists and chemists, but are also easily compounded by any experienced retail pharmacist.

While the Council is acting solely for the medical profession it has remembered that there is no antagonism between legitimate pharmacy and medicine, that there is a mutual dependence, and that, consequently, there should be a mutual cooperation between the Council and legitimate pharmacists and chemists. While most of the well-known firms have been cooperating with the Council, some seem to hesitate about doing so. The Council believes, however, that this hesitation comes from the fact that these firms have not fully appreciated the objects for which it is working, and which are believed to be as much in the interest of scientific pharmacy as in the interest of scientific medicine, and therefore, in the interest of all honest and legitimate manufacturers. The Council has endeavored to make it plain and convincing to manufacturers that in the present movement there is no intention to interfere with the proper exploitation of their products, and that it does not expect them to reveal the technical secrets involved in their processes of manufacture, but that it must insist that a truthful statement concerning the actual composition, or the medicinally active components, both as regards quantity and quality, must be given, together with tests for the identification and confirmation of such medicinal constituents.

Certainly as much to be deprecated, and more harmful in their effects than secrecy in composition, are the false and absurdly extravagant claims made by some of the otherwise reputable vendors of proprietary medicines. These claims equal and occasionally surpass the claims made by "patent-medicine" vendors in their advertisements in the newspapers. During the last few years this method of advertising has grown steadily worse, each advertiser apparently wishing to outdo every other in eulogizing his particular preparation. It has finally come to pass that a plain, truthful statement regarding the therapeutic value of an article is generally considered valueless, and even reputable firms have not hesitated to make statements in their advertising literature that have been far from the truth. Many manufacturers acknowledge this and excuse themselves by saying that others have done it and they had to. They acknowledge that loose methods regarding this feature of their business have been in vogue, largely due to unchecked competition by unscrupulous concerns. We presume there is no objection to a reasonable optimism on the part of the manufacturer; but obvious misrepresentations as to the therapeutic value are quite as dishonest as misstatements concerning the composition.

Another difficulty which the Council has experienced in its investigations of synthetics, mixtures and new remedies is found in the character of the names proposed therefor. It is a recognized principle that the name proposed for a remedy should not in any way mislead or deceive. If the name, therefore, is indicative of origin, the origin indicated must be the real one. If, on the other hand, it is indicative of quality or property, the preparation must have that quality or property. Names which, by their ending or otherwise, are indicative of definite classes of compounds, or which in any part of the name show derivation from any particular source or the possession of any particular quality, must be true to the indication. Many preparations would be excluded from classification by reason of false or misleading names.

Investigation has shown that, as a rule, the preparations placed on the market by the regular manufacturing pharmaceutical and chemical houses are as represented; at the same time we regret to state that in some instances otherwise reputable firms have been offering to the profession articles that are not in accord with the claims made for them. The Council does not think it wise to be more specific at this time, believing that these preparations will be withdrawn, or that a true statement will be made regarding their character and composition.

Investigation has also shown that certain remedies are

being manufactured under patents that do not conform to the specifications of the patents.

Attention is called to the fact that occasional statements respecting the nature of the substances occurring in the mixture or methods of preparation are made by manufacturers which seem to be contrary to the established principles of chemical reactions. As an illustration of this, it may be stated that the mere mixture of two substances, which may possibly react chemically, is not properly represented by supposing that complete chemical reaction has taken place unless that actually has occurred. This is especially true of certain very complex organic compounds, which, it appears, can not possibly be made by the preparation either of the pure acids or of the pure bases, but in which attempts are made to produce the combination by mixing the substances in the crude or unmanufactured state and assuming that the chemical reactions have taken place.

In these cases the statement of the manufacturer should convey the facts of the case and not the assumed reactions.

As was mentioned in the former report, an investigation of some of the so-called cod-liver oil preparations has led the Council to believe that some of these articles are fraudulent, since they contain no cod-liver oil, and that both the public and the medical profession are being greatly deceived in many articles that are placed on the market as tasteless or fat-free cod-liver oil.

These are the features of existing conditions that are retarding the work and delaying the approval for admission of some articles which otherwise might be accepted.

The Council recognizes that sufficient time should be allowed manufacturers to make the necessary changes in their labels, circulars and printed matter to conform to the rules. July 1, 1906, has been tentatively fixed as the date when compliance with the rules be required of all preparations. It is hoped that soon after that date it will be possible to issue the first edition of the proposed book, "New and Non-Official Remedies." Although the first number will not be complete, the annual revision will afford opportunity for the admission of such articles as may not at that time have been acted on.

It is hardly necessary to remind you that there is much detail work of a chemical nature connected with this work, and while some of the members of the Council have been devoting much time and labor in this direction it is believed that some of this detail work could be done much more satisfactorily if facilities for it were provided by you at the Association building. Therefore, the Council begs to suggest that, if it is possible to do so, a chemical laboratory be established by the Association with a competent chemist in charge. There is a great amount of work to be done, and it is work that must be continued if the medical profession in the future desires to protect itself from unscrupulous promoters.

The Council reiterates its former plea to those connected with hospitals for their co-operation in making clinical tests. There has been some co-operation of this nature, but not so much as the Council wishes it could have.

The prospects for a satisfactory solution of the various questions which confronted the Council at the beginning are more favorable as time goes on; it wishes to state, however, that the ultimate success of the work must necessarily depend largely on its endorsement by the members of the American Medical Association and by the physicians in general limiting their support to those manufacturers who are supplying them with honest preparations in a legitimate manner.

The evident appreciation of the efforts of the Council by the medical profession of the country is highly gratifying and encouraging.

Respectfully submitted,

C. LEWIS DIEHL, C. S. N. HALLBERG, ROBERT A. HATCHER, L. F. KEBLER, J. H. LONG, F. G. NOVY, W. A. PUCKNER, SAMUEL P. SADTLER, J. O. SCHLOTTERBECK, GEORGE H. SIMMONS, TORALD SOLLMANN, M. I. WILBERT, H. W. WILEY, JULIUS STIEGLITZ,

Members of the Council on Pharmacy and Chemistry, American Medical Association.

On motion of Dr. E. D. Ferguson, the report was received; and on further motion of Dr. Frank Billings, it was referred to the Reference Committee on Reports of officers (page 1873).

Report of the Committee on Reciprocity.

REFERRED TO COMMITTEE (see page 1875).

Dr. W. L. Rodman, Philadelphia, read the report of the Committee on Reciprocity.

To the President and Members of the House of Delegates:

Gentlemen:—Your Committee on Reciprocity respectfully submits the following report: Owing to the geographical location of its members, one living in Kentucky, Colorado, Montana, New York and Pennsylvania respectively, but a single meeting of the full committee has been held during the year. There has, however, been considerable correspondence between the Chairman and other members, and a number of meetings between the members living in New York and Pennsylvania. Two of the members met by appointment at the recent meeting of the Medical Council in Chicago, and we considered the work being done by that body as closely allied in every way with the broad question of reciprocity (based on equity). We were much impressed with the meeting, and regret that the other members could not have been present. We are unanimously of opinion that reciprocity based on equity can only result in time through the excellent work now being carried on with a certainty of fruition by your Council on Medical Education. We wish to commend in the highest terms the valuable and unselfish work which has been done by the Chairman, Dr. Arthur D. Bevan, and his associates, and to state it as our belief that they have already accomplished all that could have been asked, and more than could have been reasonably expected in so short a time. Your committee believes that such a central or national body, and it only, can so carry on the work of medical education until what has been a reproach to our country shall greatly redound to its credit. Their functions are only advisory, and not mandatory, it is true, but their action has been thus far so conservative and reflects so fully the opinions and wishes of the profession at large, that already there is behind the Council on Medical Education a moral support and sentiment which have resulted in enacting their suggestions into laws by each of the sovereign states.

The standard requirements now recommended prerequisite to the practice of medicine consist of five cardinal points, as follows: "1. Preliminary requirements to be a high-school education or its equivalent, such as would admit the student to one of our recognized universities. 2. Preliminary requirements to be passed on by a state official, such as the superintendent of public instruction, and not by any one connected with the medical college. 3. A medical training in a medical college having four years of not less than 30 weeks each year, of 30 hours a week of actual work. 4. Graduation from an approved medical college required to entitle the candidate to an examination before a state examining board. 5. The passing of a satisfactory examination before a state examining board." More than this can not reasonably be asked at this time in the way of a standard. We would earnestly suggest, however, that the work of the Council would be made far more effective if an inspector, fully acquainted with medical teaching, were empowered to visit as many schools as practicable each year to see that published requirements are being met and lived up to. It is not difficult to do so on paper. Such an inspector should be given every possible support and assistance by the dean of every school visited, and his reports to the medical council should reflect accurately the didactic, laboratory and clinical work being done by the several colleges. In this way, and only in this way, will some of the schools be kept up to the mark. While it is manifestly impossible for all to be visited and carefully examined each year, the expectation that an examination may be made without warning will surely prove a stimulus where it is most needed.

We would also recommend that the Council on Medical Education urge on the several states and territories, through their examining boards, the recognition and acceptance of the commissions of all medical officers in the Army, Navy, and Public Health and Marine-Hospital Service without question or examination. The government services are, and have ever been, distinctly creditable to the country, maintaining a standard higher than that of any state, therefore such officers should be allowed to practice wherever they are stationed, or, on retirement from their respective services, to take up civil practice without further examination. The commissions of medical officers are pretty generally recognized and accepted now, but it is not to the credit of a few states that they withhold such courtesy from men of acknowledged talents and professional attainments. There are still good causes for complaint on the part of practitioners of merit and experience who, on account of ill-health or other reasons, are compelled to change

their location and must submit to an examination in the state of their adoption. A case in point: A practitioner of the highest moral character and scientific attainments graduated at the University of Dublin 25 years ago. Ten years later he settled in Philadelphia, graduating from and subsequently teaching in one of its schools. After 15 years of hard and commendable work, which brought him a lucrative practice and fame more than national in character as a specialist, his health failed him and with his wife he sought relief in a far-distant state. Knowing of his high attainments and exalted character, I tried to get a license for him to do consultation work in his new home without examination. I happened to know well the chairman of the state board. I felt and explained that the services of this eminent specialist would be of service to the physicians where he was. The reply which I received, while perfectly courteous and sympathetic, was immediate and emphatic that this gentleman must not write a prescription or see a patient until he should have passed the state board. The said state has no reciprocal relations with any other state and exacts an examination of every practitioner coming within its borders. There are yet, and we think will be for some years, many such states. While keenly sympathetic with states having a high standard and the courage to maintain it, your committee feels that if such states find it safer and better for the interests of their respective commonwealths to recognize no state license, because of the low standard of some, then they should so amend their laws as to recognize a certificate of a general and central body such as the Council on Education. Dr. Frazier, dean of the University of Pennsylvania, one of the members of that body, knew well the standing of the physician referred to. The members of the committee are so located geographically that, frequently at least, one of them would know all about the applicant, and more often still could get perfectly satisfactory evidence of his fitness for licensure. The high standard of the Council makes it impossible that either a charge of incompetency or unfairness could be brought against any one. All are experienced teachers in the leading schools of this country, and their advice should be accepted by every state and territory. That they would be as careful and rigid in their examination as any state board no one can doubt. Then, if so, what are ahe advantages to the candidate for licensure?

1. Their sessions are held in Chicago, practically the geographical center of the country.

2. All its members are, and will always be, experienced teachers, and, therefore, competent examiners.

3. It is more satisfactory, economical, and less embarrassing to get a license before moving to a distant state.

4. Many would prefer a general license to practice, if it could be had, and would willingly pass a more rigid examination to get it. Moreover, a physician moving from one state to another seeking either health or fortune, is not assured of success in advance and may be compelled to move repeatedly. Should such be the case, as it frequently is, the physician is held up by the several state boards. All should be empowered to recognize a license granted by the Council on Medical Education, admittedly the highest authority on the subject, as they are in possession of all facts pertaining to the school whence the applicant graduated.

5. The work of the Council is already too laborious to permit of its examining all, or any, recent graduates. It might, however, be willing to examine those physicians caring to apply, who after at least ten years of honorable practice are compelled to change their location. Believing in a high standing for all states and at all times, we would not be understood as intimating that any state board should be less strict than it is in protecting the interests of the commonwealth it serves. A majority should be even stricter than they are. But we do maintain that the physician of ten or more years of practice and recognized moral standing, one who would be a credit to any community, should not be compelled to sit between men just out of college and take the same examination. The novitiate should rightly be examined rigidly in all the branches, and his examination is, and must be, largely didactic. The practitioner of experience is entitled to an examination chiefly clinical in character.

6. Chicago offers abundant clinical facilities and they could be utilized by the Council in the examinations.

The Confederation of Reciprocating, Examining and Licensing Boards has materially advanced the cause of reciprocity during the past year, as 13 states issued 488 certificates. The same states issued 720 certificates since 1902. Eight states in the confederation have made no report.

DETAILED STATEMENT OF CERTIFICATES ISSUED THROUGH RECIPROCITY, 1905.

States.	Qual. No. 1. 1905.	Qual. No. 2. 1905.	Total. 1905.	Total since 1902.
District of Columbia	1	1	2	7
Georgia*	..	..	..	..
Illinois	39	..	39	60
Indiana	4	7	11	43
Iowa	51	8	59	98
Kansas*	..	..	..	..
Maine*	..	..	..	..
Maryland*	..	..	..	..
Michigan	33	18	51	101
Minnesota	20	1	21	21
Missouri*	..	..	..	..
Nebraska*	..	..	..	..
Nevada*	..	..	..	..
New Jersey	162	..	162	162
North Dakota	3	..	3	3
Ohio	23	..	23	33
South Carolina	18	..	18	18
Vermont	8	..	8	8
Virginia*	..	..	..	..
Wisconsin	..	..	67	142
Wyoming	24	..	24	24
	386	35	488	720

* No report received.

If all the states were to join the Confederation, which is unlikely, it would still be desirable to have a central board for the reasons already given. The good work now being done by the Council on Medical Education, the several state boards, the Confederation of Reciprocating Boards and medical colleges throughout the country, is an earnest of what can and should be done. Let us aid them in every way, for it is only by the co-operation of all these forces that reciprocity, just and abiding, can be reached. None other is desirable.

J. M. MATHEWS, W. B. COLEY,
T. J. MURRAY, WM. L. RODMAN, Chairman.

On motion of Dr. Percy, Illinois, it was referred to the Reference Committee on Medical Education (see page 1875).

The President called for the Report of the Committee on Organization.

Dr. J. N. McCormack, Chairman of the committee, asked for further time, which was granted (see page 1870).

The report of the Committee on Scientific Exhibit was called for, and as the Chairman, Dr. F. B. Wynn, Indiana, was absent, it was passed (see page 1871).

On motion, the House of Delegates then adjourned until 2 p. m., Tuesday.

Third Meeting—Tuesday, June 5

The House of Delegates convened at 2 p. m., and was called to order by President Mayo.

The minutes of the previous meeting were read and approved.

The Secretary read the report of the Committee on Walter Reed Monument as follows:

Report of Committee on Walter Reed Monument.

ACCEPTED AND COMMITTEE DISCHARGED.

The Committee on the Walter Reed Memorial Fund desire to submit, as is required, their report, and, as their work is practically finished, would ask to be discharged.

The amount subscribed to the fund up to May 1, 1906, as reported to the committee by General Calvin DeWitt, Secretary of the Walter Reed Memorial Association, is $20,943.64. The amount paid in is $19,730.64, leaving subscribed, but not yet paid, $1,213.

It was the desire of the committee and also of the Walter Reed Memorial Association that the sum of $25,000 should be raised. The committee regret very much indeed that American cities and towns which have been devastated by yellow fever have contributed much less than $1,000 all told, and nothing in the way of public, municipal or state subscriptions. They still further, and especially regret that the sum total from Cuba has been only $25. It seems to the committee that the country from which yellow fever was eradicated after having been continually present for 140 years, and which has had pointed out to it clearly the way in which future epidemics can be absolutely avoided, should certainly have made some substantial acknowledgement of the services of a surgeon who not only made a contribution of enormous value from the sanitary point of view, but who has established its future commercial prosperity.

The committee can not tell precisely the amount subscribed by the medical profession, but it is a very large proportion of

the nearly $20,000 collected to date. It gives us pleasure to call attention to the fact that while few business men have recognized the enormous money value of Dr. Reed's services, to say nothing of the saving of human lives, his own profession has given such substantial recognition of the worth of his services in preventing a disease which has committed such dreadful havoc in the past, but will never do so again.

JOSEPH D. BRYANT,
A. C. CABOT,
T. S. CULLEN,
VICTOR C. VAUGHAN,
ROBERT F. WEIR,
W. W. KEEN, Chairman.
Committee.

On motion of Dr. V. C. Vaughan, Michigan, the report was adopted.

Dr. Philip Mills Jones, California, moved that the committee be discharged with the thanks of the House of Delegates for its work. Seconded and carried.

The report of the Committee on Scientific Research was called for, when the Secretary read a telegram from the Chairman of that committee, Dr. Alfred Stengel, stating, "Unavoidably detained; will present report of committee Wednesday."

Report of the Committee on Organization.

READ AND REFERRED TO COMMITTEE (see page 1873).

Dr. J. N. MacCormack, Kentucky, presented the report of the Committee on Organization, as follows:

Gentlemen:—Since my last report to the House of Delegates at Portland, I have made regular itineraries in the states of Minnesota, Oregon, California, Texas, Oklahoma, Tennessee, Illinois and Kentucky, and have held one or more meetings or attended the state meetings in North Dakota, Montana, Washington, Idaho, and Arkansas. As reports of the conditions found and the work done in most of these states have already been published in THE JOURNAL in a more extended form than would be possible or profitable here, I shall content myself with a brief account of two phases of my experience which appear to be of special interest and importance.

For two years or more laymen had been invited to occasional meetings, and my addresses have been more or less modified and elaborated to adapt them to such audiences. The possibility of receiving representatives from all classes of the laity, and finally of regular mixed and lay audiences into a general plan for a campaign of education of the public in regard to medical and health matters was such a gradual growth and evolution, that I am not sure that it can yet be said to be fully complete in my own mind even. I have given it as fair a test as was possible under existing conditions in the five states last visited, and the results were most gratifying wherever audiences were secured.

Singular as it may seem at first sight, I found that lay attendance at the meetings depended almost entirely on the extent of the medical organization in the community. As a rule, laymen of the thoughtful classes, who would especially appreciate and be responsive to the view of co-operative work suggested by me, have never attended such meetings in the past, did not know even that they could do so, or wanted to, and, in fact, will not do so unless personally invited and urged by their family physician or an authorized committee of the profession. In many localities I found that leaders in the profession, and even leaders in this Association, had little conception of the purpose of my visit, although they usually became most enthusiastic during the meetings, and after it was too late to secure the attendance of many of those whom it was most important to have present.

Once there, laymen of the intelligent classes took quite as active and intelligent interest in everything pertaining to the affairs of the profession as medical men did. I found it an easy task to make them understand that every interest of the profession, scientific, moral and material, concerned them quite as much as it did even the members of the profession. I discussed all of these interests in the plainest and most outspoken way, often almost to the point of tediousness in order to prevent misunderstanding, and men and women would almost invariably follow to the last word, with unbroken interest, and then take part in the public discussion which always followed in a way to indicate usually a most intelligent comprehension of the matter in hand. I am sure that the possibilities of this feature of the work have not even dawned on the mind of the profession in most communities.

The other phase of work on which especial emphasis should be laid is that relating to post-graduate work in the county societies. This is in such successful operation in a number of counties that it has passed the experimental stage. In a number of these the meetings are held weekly and in some two and even three times a week. In those securing the best results the course of study has been mapped out with care; regular teachers are selected from the younger element of local membership, and all available equipment and clinical material are utilized for scientific and practical demonstrations. Such a course is possible when as many as three real, live doctors can be conveniently grouped together in any county, or in any section of any county.

Next to the question of medical education, which affects the man already in practice only indirectly, how to make the county society what it should be, and what it can be in every jurisdiction, is the great problem now before the profession of this country.

As compared with it, all others sink into insignificance. Given these as a foundation in every county, the success of the state and national organizations is not only permanently assured, but with the mutual understanding and co-operation between the profession and the public, made possible through them, the difficulties in the way of securing and enforcing legislation and all similar matters will be gradually eliminated, and the profession will not only come into its own, but, what is still more important, benefits would come to the people of this country through a unified, vitalized, organized, co-ordinated profession, which would make it the most powerful civilizing and uplifting influence of modern life.

Another, and the concluding point, developed and emphasized in the course of my varied and extended experience in going over this country, and especially within the last year, has been the evidence at every turn of a powerful, alert and implacable foe to organization in the proprietary medicine interests, with its agencies and tentacles reaching into and utilizing every distracting and disaffected element in every section. Resourceful, untruthful and unscrupulous, with unlimited funds, and backed by a powerful element of both the professional and lay press, its literature, multiplied, distorted and misleading, has been showered on the profession like the leaves of Vallombrosa. Anxious only for results, it has carefully sought for every weak point in our line of defenses, varying its method and apparent object of attack as to time and locality with a skill and judgment worthy of a better cause. School interests are appealed to one week, journal prestige the next, and the personal prejudices and peculiarities so abundant in our profession, always with the one constant purpose in view of playing class against class and interest against interest, in order to serve its own unvarying and nefarious purposes. To this end advantage has been taken of our mistakes, unavoidable, in the evolution of such an undertaking; honest differences of opinion have been exaggerated or misinterpreted, with a cloud of dust always enveloping or concealing its own deformities, which would otherwise repel honest, but misguided members of our profession which the proprietary interests have been constantly able to use against us.

The defense against this and all similar and lesser evils is general, unusual and all pervading organization and unification, and especially of the kind which can only be fostered in county societies. To this, either as your representative or in my individual capacity, I have decided to dedicate the remainder of my life.

On motion, the report was referred to the Reference Committee on Reports of Officers.

Report of Reference Committee on Amendments to Constitution and By-Laws.

Dr. Alexander R. Craig, Pennsylvania, presented the report of the Reference Committee on Amendments to the Constitution and By-Laws as follows:

The committee would urge on the House of Delegates the advisability of extreme conservatism in changing the Constitution and By-Laws of the Association. The effort of the committee will be to recommend only such changes as in their judgment are demanded by the growth of the Association.

CHANGES IN ARRANGEMENTS FOR SESSIONS.

1. The committee recommend the adoption of the amendment to the Constitution, Article VIII, offered at the Portland session and awaiting your action at this session, viz.:

By adding the following: "The time and place of session may, however, be changed by the unanimous action of the Board of Trustees at any time prior to four months from the time selected for the session."

So that Article VIII shall read: "The Association shall hold an annual session at a time and place to be fixed by the House of Delegates. The time and place of session may, however, be changed by the unanimous action of the Board of Trustees at any time prior to four months from the time selected for the session."

ALTERNATES FOR DELEGATES.

Of the amendments suggested in the report of the General Secretary, and which this Reference Committee understands now to be before the House of Delegates for your action, the committee recommends the following change in Book 4, Chapter 12, Section 2, page 25:

The addition to this section of the word after "representative" the words "and an alternate," so that the last sentence of this section shall read: "Each Section shall also elect annually one representative and an alternate to the House of Delegates of the American Medical Association to serve one year."

PUBLIC SERVICE OFFICERS' MEMBERSHIP.

The committee further recommend that Book 1, Chapter 1, Section 1 of the By-Laws, page 6, shall be so changed as to read:

Section 1. Membership—How Obtained.—A member in good standing of the constituent association of the state in which he resides may become a member of the American Medical Association by presenting to the General Secretary: (1) Satisfactory evidence of the above qualification; (2) written application for membership on the prescribed form: (3) the annual dues. Commissioned medical officers of the U. S. Army, U. S. Navy and U. S. Public Health and Marine-Hospital Service shall be members; they shall not be required to pay annual dues, nor shall they receive THE JOURNAL of the Association, unless on personal subscription.

In order to overcome the difficulty suggested by the U. S. Army, the U. S. Navy, and the U. S. Public Health and Marine-Hospital Service of making appointments to the House of Delegates for a term of years, your Reference Committee recommend the adoption of the following addition to the By-Laws, Book 2, Chapter 4, Section 2, page 9, the following sentence:

Except that delegates elected by the sections shall hold office for but one year, and appointments made from the U. S. Army, the U. S. Navy and the U. S. Public Health and Marine-Hospital Service shall be for one year.

Dr. Frank Billings, Illinois, moved that the report be accepted, and that the recommendations contained therein be considered, one by one. Carried.

Section I was read, after which Dr. Guthrie moved its adoption. Seconded. After some discussion by Drs. Coe and Moore, Dr. Coe moved to lay this section and the recommendation on the table. Seconded and lost.

Dr. J. N. Jackson, Missouri, thereon moved the adoption of the section as recommended by the committee, which was seconded and carried.

Section II of the report was read and adopted.

Section III was read, and after discussion by Drs. Grosvenor, Craig, Moore, Rodman, Vaughan, Cantrell, this section and the amendment were adopted.

Section IV was read and adopted, after which Dr. Frank Billings moved the adoption of the report as a whole, which was seconded and carried.

Report of Committee on Scientific Exhibit.

Dr. F. B. Wynn, Indiana, presented the report of the Committee on Scientific Exhibit:

The seventh scientific exhibit is submitted for your inspection. The first exhibits, in the very nature of things, were heterogeneous collections. The absence of pathologic grouping made inspection often tedious. The next step, therefore, in the evolution of the exhibit was the grouping of specimens or exhibits, to illuminate certain phases of pathology, hygiene, physiology, etc. The particular topics chosen have been varied from year to year, according to the subjects which were prominent before the medical and scientific world. The third step naturally sought was efficient demonstration of the exhibits presented. This third stage, begun three years ago at Atlantic City, has at this session attained a degree of perfection which it would be difficult to surpass. The program of demonstrations herewith submitted for your consideration would alone be worthy a meeting of this great organization. Its range and quality are not only a matter of pride to those concerned in its preparation, but show the pleasing fact of a growing tendency of scientific medical men everywhere, to marshal under the banner of the Association.

In view of the extraordinary character of exhibits and demonstrations, it has seemed to the committee that a volume published, containing copious illustrations and detailed descriptions of the demonstrations formally made, would afford the medical and scientific world very striking evidence of the quality and extent of the scientific work being done by members of the Association.

Brief reference may be made at this time to the beneficent influence of the Scientific Exhibit of the Association on smaller medical organizations. State associations quite generally, and even some county organizations, have adopted the exhibit idea. A powerful stimulus has been given to medical measures throughout the country. Those who have noted the exhibits from year to year must have observed the marked improvement in the artistic quality of the material presented. The national tuberculosis exhibit, recently seen in many of the larger cities of the United States, may likewise be looked on as an outgrowth of the work of this Association. The committee suggests that not alone in tuberculosis, but on various sanitary and hygienic questions, the exhibit idea, under judicious medical supervision, might be used with telling effect for instructing the laity. To this subject the Association should address itself.

In conclusion, the earnest thanks of the Association are due the large number of men who have contributed so abundantly to the success of the exhibit; and particularly to Drs. W. T. Councilman, Henry A. Christian and F. B. Mallory, for their energetic and masterful service in organizing and carrying the exhibit to a successful issue.

FRANK B. WYNN, Director.

On motion the report was adopted.

Loving Cup Given to Dr. Wynn.

Dr. T. J. Happel, Tennessee, presented a loving cup to Dr. Wynn on behalf of the Board of Trustees, and in so doing said:

Mr. President, Gentlemen of the House of Delegates, Dr. Wynn:—To me has been assigned by my confrères on the Board of Trustees a duty that should be, and would be, more pleasant to one who is a fluent speaker, or who could deal in other things than an array of facts or cold figures. I am but a plain, blunt man, a country physician, who knows not how to say things otherwise than in the most direct and the plainest possible way. What is said to-day will come from the heart.

I am directed to express to you the appreciation of the Board of Trustees, of this House of Delegates of the American Medical Association, in fact, of the medical profession of these United States, for the work you have done in bringing into the life of this Association, nurturing, and causing to develop beyond the expectation of the most sanguine, that which was first known as a pathologic exhibit, but which has now grown to such proportions as to have merited and received the title of "Scientific Exhibit." Prior to the beginning of this century such an annex to the sessions of this Association had never been dreamed of, or discussed.

The records show that this work of yours was begun in 1900, with sixteen exhibits, chiefly from the Indiana State Medical Society. The display was such as to attract the attention of many of those who attended the Association session at Atlantic City that year, and while there were only sixteen exhibitors, the importance of the work undertaken by you was at once recognized by the Association, and the Board of Trustees was requested to appropriate the necessary sum of money to enable you to not only keep up the good work, but to foster and develop it. The results of your labors were shown when in 1901, at St. Paul, there were twenty-nine exhibitors, which was the greatest number presenting specimens at any time, yet subsequent years have shown an increasing interest in the subject, there being not so many exhibitors, but more exhibits by those who sent specimens. While not much can be said for the beauty of the exhibit, it is rapidly becoming one of the most important features of the meeting of the American Medical Association. Your works remind me, Dr. Wynn, of a fine painting which I saw in the palm garden of the St. Charles Hotel, in New Orleans, when we went there in 1903. On the wall, finely framed, is, as already stated, an oil painting, done by one of the old masters, which, seen at a short distance, appears to be a ghastly, grinning, decomposing skull. You can imagine that you can almost see the destructive agents of death devouring its contents. As you withdraw yourself further and further from the painting, the appearance of it begins to change. The picture soon assumes the form and shape of a young lady, and at a certain distance, as one of the fairest of her sex, her eyes tinted with the blue of the violet, glowing with the light of the stars, and her cheeks painted with the pink of the peach blossom, indicative of the most perfect health. I say that your work reminds me of this picture—why? Because, close to these exhibits, we behold the destructive work of the different animalculæ, bacilli and germs producing death, but when out of sight of these studies, we realize that they are made for the purpose of discovering enough of the life cycle of each of these micro-organisms to combat them successfully in the human system, and to restore the blush to the cheek of the maiden, and the starlight to eyes that have been

dimmed by the work of some of the destroying agencies which your work has enabled us to identify and to guard against. I feel that I voice the sentiment of every one present here to-day when I express to you the wish that you may live long to carry on this work so auspiciously begun by you. We trust that this Scientific Exhibit, which is yet in its infancy, may continue to grow both in size and importance, till your fondest dream in regard to it may have been realized; that hope has reached full fruition.

Now, Dr. Wynn, as a token of our appreciation of the work you are doing for this Association in your special department, representing the Board of Trustees, and feeling that I express the good will of this House of Delegates for you, I present to you this loving cup, and drink to your long life and happiness in the pure water which it now holds. Keep it as an heirloom in your family, handing it down from son to son, telling them to keep it worthily, and when one of them asks whence it came let him be told that it was given you as a token of appreciation of the work which you have so unselfishly done for the advancement of the most truly scientific feature of the sessions of the American Medical Association.

Dr. Wynn thanked the Board of Trustees and the members for this beautiful tribute of their confidence, esteem, and appreciation of the work he and his colleagues had done and were doing.

Report of Committee on Recording Minutes.

READ, AMENDED AND APPROVED.

The report of the Committee on Recording Minutes was called for, and was read by the Secretary, as follows:

To the President and Members of the House of Delegates:—The committee appointed to consider the method according to which the minutes of this house are kept and published, and to make recommendations in reference thereto, begs leave to submit the following report:

1. The committee finds, by examination of the minutes for several years past, that at places they have been incomplete by reason of the omission of reports, resolutions, communications, etc., the documents in question being referred to, but not printed in full.

The committee recommends that such omissions be not made in the future.

2. The committee is of the opinion that the names of the members of the House of Delegates present at each session should be reported in the minutes. Inasmuch as this could not be done without a call of the roll, the committee recommends that calling the roll be made a part of the regular order of business at each sitting of the house.

3. The committee is also of the opinion that to prepare complete and full minutes of a session of the House of Delegates requires more time than is available between the sittings. The committee recommends, therefore, that, while the Secretary should read at the opening of each session a memorandum of what transpired at the previous sitting, such memorandum shall not be deemed the complete and final minutes of the session.

4. The committee recommends that as early after each annual session of the Association as can be done, the Secretary shall prepare full and complete minutes of the session and cause them to be published in pamphlet form for distribution to the members of the House of Delegates and to be inserted in THE JOURNAL for the information of the members of the Association, said minutes to be submitted for adoption at the next annual session, and, as a matter of course, to be subject to correction.

5. The committee recommends that the original notes of the proceedings of the House of Delegates, made by the official stenographer, be permanently filed, in order that should differences of opinion arise as to what was said or done, such notes can be referred to.

6. According to the information of the committee, adjourned meetings of this body have been held in the State of Illinois for the purpose of validating in that state business transacted in other states, and thus technically to comply with the requirements of the charter of the Association. Looking back over the official minutes for several years past, no minutes of such meetings have been found. The committee, therefore, recommends that the transactions of any such adjourned meetings as may be held in the future be published in THE JOURNAL and also appended to the minutes of the annual meeting recommended to be published in pamphlet form.

All of which is respectfully submitted.

DONALD CAMPBELL, W. S. FOSTER,
J. F. PERCY, F. PASCHAL,
W. H. SANDERS, July 13, 1905.

The Secretary, after reading the report, stated in reply that in two or three instances resolutions offered at previous meetings had been accidentally lost or misplaced by members of committees to whom such resolutions had been referred; hence only the gist of such resolutions could be printed in the minutes. Furthermore, the Association published the minutes of the House of Delegates in pamphlet form; that the shorthand notes of the official stenographer were on file and could be referred to at any time should differences of opinion arise; that the minutes of adjourned meetings of the Association for validating business transacted in other states had been recorded, but not published in the official minutes of the House of Delegates, as it was not thought necessary to do so.

Dr. Joseph W. Grosvenor, New York, moved that the report of the committee be considered section by section.

This motion was seconded and lost.

It was then moved that the report be adopted. Seconded.

Dr. W. H. Sanders, Alabama, reiterated the points contained in the report of the committee, and said as its Chairman he was glad to know the reasons for the incompleteness of the minutes in some particulars in the past. He was also glad to know that the shorthand notes of the official stenographer were placed on file; and that the minutes of adjourned meetings for validating business done in other states had been recorded. He said there was no intention on the part of any member of the committee to reflect on the work of anybody, but as the Association was undergoing a process of evolution it was essential to have the proceedings as complete as possible.

After discussion, which was participated in by Drs. Gray, Jackson, Chassaignac, Happel, Sanders, a delegate suggested that Section 1 of the report be stricken out as he thought it reflected on the official stenographer.

It was therefore moved, as an amendment, that this section be stricken out and that the report be adopted as presented.

The amendment was seconded, accepted, and the original motion as amended was carried.

Orators Nominated by Sections.

AMENDMENT REFERRED TO COMMITTEE (see page 1875).

Dr. E. Eliot Harris, New York, offered the following amendment to the By-Laws:

Chap. VII, Sec. 5, p. 13 "The Sections on Practice of Medicine, Surgery and Anatomy and Hygiene and Sanitary Science shall nominate one candidate from each section to be elected by the House of Delegates, to deliver orations under the auspices of the respective sections.

These nominations shall be submitted to the House of Delegates before the hour set for election.

This was referred to the Reference Committee on Constitution and By-Laws.

Report of Reference Committee on Reports of Officers.

Dr. Philip Mills Jones, California, presented the report of the Reference Committee on Reports of Officers:

Mr. President and Delegates:—Your committee has carefully considered the reports of officers submitted to it, and begs to report thereon, with recommendations, as follows:

President's Address (See page 1849).

INVITATION TO MASSACHUSETTS GUESTS.

We recommend the adoption of the following, suggested in paragraph 4 of the President's address:

Resolved, That all members of the Massachusetts Medical Society are hereby cordially invited to attend the various sessions of the American Medical Association now being held in this city of Boston, and to participate in the proceedings of the same.

THANKS TO SECRETARY.

Paragraph 8. Your committee feels that the President has placed this body under an obligation of gratitude to him for so eloquently stating the valuable services rendered our Association by its Secretary, and recommends the adoption of the following:

Resolved, That the American Medical Association extends to its Secretary, Dr. George H. Simmons, its sincere thanks for the able, conscientious and efficient manner in which he has conducted the affairs of his office and the ability which he has displayed in making THE JOURNAL of our Association the foremost medical publication in the world.

IMPORTANCE OF GOOD TRUSTEES.

We believe that this House of Delegates is again indebted to the President for directing our attention to the invaluable services rendered our profession and our Association by the Board of Trustees, and we heartily endorse his recommendation to use the greatest care in the selection of those whom we elect to this most important office, to the end that no person

be elected a Trustee whose affiliations are such as to be detrimental to the best interest and welfare of our Association. We recommend the passage of the following:

Resolved, That the Trustees of this Association be nominated orally and be elected by ballot of the House of Delegates in separate order. We further recommend that at least two nominations be made to fill each vacancy in the Board of Trustees.

Paragraphs 12 and 13 refer to the Constitution and By-laws and should be referred to the special and appropriate committee.

POLICY ON PUBLICATIONS.

Paragraphs 14 and 15. Your committee heartily endorses the opinion expressed by our President concerning the publications of the Association, and highly commends to the Trustees a continuance of the present policy relating to publications other than THE JOURNAL.

We also most heartily recommend for your endorsement the very moderate words of our President in condemnation of the unspeakable dishonesty and nastiness which are to be found in the nostrum and "patent-medicine" business.

ORGANIZATION WORK PRAISED.

We commend to your careful consideration the most remarkable work of our committee on organization and recommend the passage of the following:

Resolved, That the sincere thanks of the American Medical Association be extended to Dr. J. N. MacCormack, and that we earnestly request him to continue his work of organizing the medical profession of the United States.

Report of the Secretary. (See page 1851.)

BIOGRAPHICAL CARD INDEX, ETC.

Most of paragraphs 2, 3 and 4 of this report deal with the Constitution and By-laws and properly go to that committee. In considering the balance of the report, dealing with membership, Councilors' bulletin and biographical card index, your committee is deeply impressed with the efficient and systematic manner in which the work of the Secretary for the betterment of the Association has been prosecuted. The fact must be recognized that when any great work is to be accomplished, the actual labor of direction and organization must be in a few hands; and we feel that the Association is to be congratulated on having in charge of this work two such able men as Drs. George H. Simmons and J. N. MacCormack. We earnestly recommend for your endorsement the various enterprises enumerated which have been originated by the Secretary.

Report of Trustees. (See page 1861.)

The report of the Trustees naturally divides itself into four sections: 1, The general conduct of the financial and business interests of the Association; 2, the business conduct and general policy of THE JOURNAL; 3, the work involved in undertaking to publish a directory of physicians; and 4, the work of the Council on Pharmacy and Chemistry, which is done under the supervision of the Trustees.

BUSINESS WELL HANDLED.

1. Your committee finds from careful examination of the report, that the business and general financial affairs of the Association have been conducted in an exceedingly able manner and recommends for your commendation the business acumen of the Trustees, and the manner in which they have handled and invested our funds and have worked toward the essential object of securing a safe and safely invested reserve fund. As the work of the Association increases from year to year and the magnitude of its responsibilities increases, the more evident becomes the desirability of having such a reserve fund to fall back on in case of any untoward emergency.

APPROVAL OF JOURNAL POLICY.

2. In regard to THE JOURNAL, your committee believes that every member of this House of Delegates fully appreciates the magnificent work that has been done in upbuilding THE JOURNAL and placing it in the foremost ranks of all medical publications. We believe that the Trustees and the Editor have done everything to carry out the wishes of the Association in regard to the business policy of THE JOURNAL, and we recommend the adoption of the following:

Resolved, That the American Medical Association heartily endorses and approves of the policy of accepting for publication all advertising matter coming within the provisions established by the Council on Pharmacy and Chemistry of this Association, believing that it is wise and desirable thus to present for the scrutiny of the physicians such articles as are honestly made and are ethically marketed.

WHEREAS, It has been noised abroad by the enemies of a united medical profession that this Association and the state medical associations are attempting or will attempt to destroy all medical journals not owned or controlled by them; and

WHEREAS, Much of the advance in medical science in the last fifty years has been due to the efforts and labors of medical journals owned and edited by physicians and others, and this Association and its work would have been greatly hindered and delayed had it not been for the moral support of these journals: now, therefore, be it

Resolved, That the American Medical Association heartily endorses, and requests its members to support, all such medical journals, no matter by whom owned, as are engaged in promoting the interests of scientific medicine and which refuse to accept financial aid or advertisements from venders of nostrums, or others inimical to the true interests of the profession.

VALUE OF DIRECTORY AND CARD INDEX.

3. Your committee agrees with the Trustees in the necessity for the medical profession keeping track of its own members. So far as the actual publication of a book or directory is concerned, your committee believes that the Association is quite right in undertaking to suppply an accurate volume of this sort at a reasonable price, and that it is better for the Association to do this work than to have any layman secure an equal or larger price from the members of our profession, for a less accurate publication of a similar sort.

But your committee believes that the mere publication of such a volume is a matter of secondary consideration. The real value of the work undertaken by the directory department, and the real value of the investment, is in the records secured and filed, on which records the data for the published volume are based. An illustration of the significance of this is to be found in California. The late lamentable disaster destroyed by fire all the records of the Board of Medical Examiners of the State Medical Society and of the County Clerk of the city of San Francisco. Fortunately, however, our Association, as part of the directory work, has secured and filed in Chicago full and accurate information concerning all licentiates of the State of California, so that we may replace these records for that stricken community. So valuable do we consider this portion of the work of conducting the directory department that we most strongly recommend the passage of the following:

Resolved, That the Trustees be requested to have constructed in the cellar of our building in Chicago, a brick vault in which all the records of this character pertaining to the graduation and licensing of physicians shall be kept.

COUNCIL ON PHARMACY AND CHEMISTRY (see page 1867).

4. Your committee has given this matter full and careful consideration and most heartily commends the endorsement of the work thus far accomplished by the Council. The magnitude of work placed in the hands of this Council can scarcely be realized by one who has not delved into the mire of corruption and fraud in search for the root of the nostrum evil. As the undertaking is large, so must firm and wise, though ever careful and sometimes conservative progress be made, and great patience must be exercised. We believe that the policy of the Trustees in the organization of the Council and in the prosecution of its work up to the present time, has been wise and safe, and we feel sure that your honorable body may, without hesitation, endorse the work of the Council and encourage its further activity along the lines which have been mapped out for it. The corrupting influences of fraud, deceit and dishonesty which have been ranged against the efforts of our Association, acting through the Trustees and this Council, are such as to demand the active support and co-operation of every honest man in support of the efforts of our Association to secure simple honesty and scientific betterment in materia medica preparations. We recommend the adoption of the following:

Resolved, That the American Medical Association extend its thanks and appreciation to the United States Public Health and Marine-Hospital Service for its co-operation in the work of the Council on Pharmacy and Chemistry of this Association, and to every member of that Council for the great work which they have done and are doing.

PHILIP MILLS JONES, Chairman.
DONALD CAMPBELL,
A. JACOBI,

Dr. Frank Billings, Illinois, moved that the report be considered section by section, which was seconded and carried.

Sections 1, 2, 3, 4, 5, 6, 7 and 8, with the accompanying resolutions, were adopted, after which Dr. E. Eliot Harris, New York, moved the adoption of the report as a whole, which was seconded.

After discussion by Drs. Grosvenor, Coe, MacCormack, Sanders, Ferguson, Vaughan, Simmons, Happel and Montgomery, the President put the motion of Dr. Harris, which was carried.

Dr. Harris thereon moved that the personal discussion be not entered on the records.

This motion was seconded by several, and carried.

Dr. C. E. Cantrell, Texas, moved that a committee of five

be appointed to take this matter up with the gentlemen who feel that they have cause for grievances and settle the matter. Seconded.

Dr. Harris said that this should come before the Committee on Miscellaneous Business; that that committee would be very glad to take the matter up and settle it in a way so that everybody would go away with good feeling.

Investigating Committee Proposed.

PROPOSAL LAID ON TABLE.

Dr. H. O. Walker, Michigan, presented a preamble and resolutions, with remarks, as follows:

Mr. Chairman:—Since the address of our worthy President of yesterday indicated the sentiment of uncertainty and distrust relating to the management of THE JOURNAL and sundry other matters, we naturally feel that these criticisms are both unjust and unfair, and yet every effort should be made to dissipate this feeling, at least from the minds of the members of this Association.

Therefore, Mr. Chairman, I beg leave to offer the following preamble and resolutions:

WHEREAS, The membership of the American Medical Association, numbering 19,285, is scattered throughout all the states and territories; and

WHEREAS, The affairs of the Association are so intricate that it is difficult to make them clear to all; and

WHEREAS, Because of these facts there has arisen the sentiment which bids fair to become disagreeably large unless the causes on which it feeds be removed, viz., ignorance of the real truth; therefore, be it

Resolved, That a committee of five, namely G. Frank Lydston, Chicago; Frederick Holme Wiggins, New York; A. H. Cordier, Kansas City, Mo.; Duncan Eve, Nashville, Tenn., and D. ". Graham, Chicago, be appointed by the House of Delegates of American Medical Association and instructed, first, to make an exhaustive study of the affairs of the Association, THE JOURNAL, etc.; second, to employ an auditing expert to go over all the books of the Association; to have power to summon officers and employées of the Association before it, to give needful testimony; and in such other ways as it may deem best to secure all facts necessary for such independent report as may be needful to accomplish its purpose.

Resolved, That a sum of money be appropriated sufficient to defray the actual expenses of this study.

Resolved, That this committee report to the House of Delegates at their next session in 1907.

On motion of Dr. J. N. Jackson, Missouri, the preamble and resolutions were laid on the table.

Dr. Philip Mills Jones, California, moved a reconsideration of the vote by which the preamble and resolutions were tabled. Seconded.

Dr. M. L. Harris, Illinois, raised the point of order that the House could not reconsider the vote by which the resolutions were tabled.

The President ruled the motion to reconsider out of order.

Committee on Insurance Proposed.

Dr. J. N. MacCormack, Kentucky, offered the following, which was referred to the Committee on Miscellaneous Business (see page 1875).

Resolved, That a standing committee on insurance is hereby created to consist of five members, two of whom shall be the President and Secretary, and the other three to be nominated by the President and confirmed by this House of Delegates. It shall be the duty of the committee to consider the relations and duties of the medical profession of this country to the insurance business, both companies and policy holders to confer, treat and act with authorized representatives of any of these interests, and it is authorized to speak and act for the profession in all matters relating to its duties and to give publicity to its plans and purposes at any time through THE JOURNAL, or otherwise, as may be deemed best.

Report of Committee on Credentials.

REFERRED TO COMMITTEE (see page 1875).

Dr. W. B. Dorsett, Missouri, reported on behalf of the Committee on Credentials:

The Committee on Credentials begs to report that in a number of cases delegates and alternates have appeared, bearing credentials faulty or improperly made out, placing the committee in a difficult and embarrassing position.

Your committee therefore begs to suggest that this House of Delegates request all State Secretaries to exercise all possible care in preparing and issuing credentials to all duly elected delegates and alternates.

We further suggest that this House of Delegates order that hereafter the Committee on Credentials be instructed to refuse to recognize any person or delegate or alternate not in possession of credentials properly made out and signed by the President and the Secretary of the state society from which the delegate comes.

The committee further suggests that the attention of the Presidents and Secretaries of all state societies be called to Book 2, Chapter 4, Section 1 of the By-Laws of the American Medical Association.

WALTER B. DORSETT, Chairman.
THOMAS MCDAVITT,
W. R. TOWNSEND,
H. BERT ELLIS,

This report was referred to the Reference Committee on Rules and Order.

California Library Committee Created.

Dr. Frank Billings, Illinois, presented the following preamble and resolutions, which were adopted:

WHEREAS, The recent disaster which occurred in California destroyed the general private medical libraries; and

WHEREAS, The need of medical books by the physicians of San Francisco and other afflicted cities of California is great; therefore, be it

Resolved, That Drs. Dana (chairman) of New York, Musser of Pennsylvania, Thayer of Maryland, R. C. Cabot of Massachusetts, Stockton of (Buffalo) New York, Forchheimer of Ohio, Sewall of Colorado, J. A. Capps of Illinois and Fischell of Missouri, be and are hereby made a committee to be known as the California Library Committee. Be it further

Resolved, That the committee be empowered to add to its numbers.

Resolved, further, That the committee be requested to select medical books and files of medical journals from libraries, medical publishers and private individuals and to forward the same to an appropriate committee of the County Medical Society of San Francisco.

Subscriptions of Members.

Dr. J. B. Donaldson, Pennsylvania, suggested an amendment, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws, proposing to amend the By-Laws so that of the annual dues $4 shall be set aside for subscription to THE JOURNAL for each member (see page 1875).

Oppose Reduction of Insurance Fees.

Dr. D. Hubert Work, Colorado, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business (see page 1875):

Resolved, That the American Medical Association heartily endorses the action of many of its component county societies in their refusing to accept a reduction of the fees heretofore paid for life-insurance examinations by certain so-called old-line companies.

Urge Passage of Army Bill.

Dr. W. L. Rodman, Pennsylvania, offered the following preamble and resolution, which were adopted:

WHEREAS, The bill to increase the efficiency of the Army (Senate 1539), which has been for two years before Congress, has the support of the War Department, of the Secretary of War and of the President, who has sent to Congress a special message urging its passage, and has been approved by referendum by the American Medical Association: be it

Resolved, That the President of this Association be requested to appeal to the Speaker of the House of Representatives by telegram, asking his good offices in bringing this measure to a vote at the present session.

On motion, the House of Delegates adjourned until 5 p. m. Wednesday.

Fourth Meeting—Wednesday, June 6

The House of Delegates met at 5 p. m., and was called to order by the Second Vice-President, Dr. K. A. J. Mackenzie, Portland, Ore.

The minutes of the previous meeting were read and approved.

Report of Committee on Scientific Research.

READ AND REFERRED TO TRUSTEES.

The Secretary read the report of the Committee on Scientific Research:

Gentlemen:—Your committee would report that in accordance with the regulations of the Board of Trustees two grants have been made for the year 1906 to Dr. G. F. Ruediger, Chicago, for further work on "Streptococcus Infections," and to Dr. Richard M. Pearce, Albany, for work on "Ether Glycosuria and the Elimination of Uric Acid, Creatin, and Phosphorus."

Dr. H. T. Ricketts of the University of Chicago applied for a grant of $200 to aid him in an investigation of mountain fever in Montana. The committee was disposed to make this grant, but on investigation found that the Board of Trustees had limited the amount of individual grants to $100, and for that reason could not comply with Dr. Rickett's request, though the subject proposed was one of great interest, and his fitness for the investigation undoubted. In view of this, we would respectfully recommend that in future the committee be em-

powered to increase the amount of grants to $200 in desirable cases, the understanding being that, as a rule, the amount shall be kept at $100. A larger number of grants might easily have been made, as a number of applications were received. None of these, however, seemed to merit the favorable recommendation of the committee.

We have felt that though the entire appropriation is small, none of it should be utilized excepting in cases in which meritorious work should be encouraged. We have, therefore, felt no regret in the fact that the entire amount appropriated has not been utilized. The only difficulty experienced has been that in some few cases good work might have been aided had it been in our power to increase the grant to $200.

ALFRED STENGEL, Chairman.

The report was referred to the Board of Trustees.

Report of Reference Committee on Constitution.

AMENDMENT TO COVER SUBSCRIPTION BY MEMBERS.

Dr. Craig presented the report of the Reference Committee on Constitution and By-Laws. As a substitute for the amendment to the By-Laws to require that, of the annual dues, $4 shall be set aside for subscription to THE JOURNAL for each member, the committee recommends an addition to the By-Laws, Book 5, Chapter 15, page 29, so that this chapter shall read:

These By-Laws may be amended on a three-fourths vote of the House of Delegates; provided, that no amendments shall be acted on till the day following that on which it is introduced except that the Board of Trustees may, by unanimous vote make such changes, and such changes only, as may be required to adapt them to the rules and regulations of the United States postal authorities.

On motion of Dr. Philip Mills Jones, California, this section of the report was adopted.

The committee recommended that the House adopt a resolution to the following effect:

Resolved, That the Board of Trustees is hereby directed to set aside so much of the annual dues of each member as shall secure for the member a subscription to THE JOURNAL of the American Medical Association.

It was moved and seconded that this resolution be adopted. After some discussion by Drs. Cantrell and Ferguson the resolution was adopted.

CHANGES IN METHOD OF ELECTION.

The committee recommends the following changes in the By-laws and advises that they be declared to become operative at the close of this annual session:

Book II—Chapter VII—Section 1, page 12—add so that the closing sentence of this section shall read: "The treasurer shall be nominated by the Board of Trustees, and the orators shall be nominated, respectively, by the Sections on Practice of Medicine, on Surgery and Anatomy and on Hygiene and Sanitary Science."

Book IV—Chapter XII—Section 3—page 25—change to read as follows: "The election of officers shall be the first order of business of the morning meeting of the third day of each annual session. To participate in the election of any section a member must have indicated on registering that he desires to affiliate with such section, and must have recorded his name and address on the section register book. The Sections on Practice of Medicine, on Surgery and Anatomy and on Hygiene and Sanitary Science shall each nominate of their section one to deliver at the ensuing annual session, respectively, the Oration on Practice of Medicine, the Oration on Surgery and the Oration on State Medicine."

On motion of Dr. W. T. Sarles, Wisconsin, this section was adopted.

TRUSTEES TO CONTROL LOCAL ARRANGEMENTS.

The following amendments to the By-Laws, introduce dat the last session by the Reference Committee on Amendments to the Constitution and By-Laws, were adopted:

Book III—Chapter X—Section 3—Strike out (a) "A Committee of Arrangements," *and re-letter the following names of standing committees.*

Book III—Chapter X—Striking out Section 4, recounting the duties of the Committee on Arrangements, add to Book III, Chapter IX: "Section 2. The Board of Trustees shall have full control of all arrangements for the annual sessions and shall provide meeting places for the Association, the House of Delegates and the various sections. It shall also have control of all exhibits. The Board of Trustees, in their discretion, may appoint a local committee of arrangements, which shall be at all times under the control of the Board of Trustees."

Chapter X—Section 7—page 29—Amend as follows: "If, after a place of session has been selected, it becomes apparent that satisfactory transportation rates can not be secured, or that the Association can not be properly entertained and cared for, the Committee on Transportation and Place of Session be and are hereby authorized to change said place of session, but said change shall not be made later than two months preceding the date fixed for the annual session."

On motion the report was adopted as a whole.

Report of Reference Committee on Business.

INSURANCE COMMITTEE APPROVED.

Dr. E. Eliot Harris, New York, presented the following report of the Reference Committee on Miscellaneous Business:

The Reference Committee on Miscellaneous Business respectfully approves the resolutions on the insurance question, asking the appointment of a special committee (page 1874).

As to the resolution offered by Dr. D. H. Work of Colorado, asking for an endorsement of the action of the several component county societies in the matter of the insurance question, the committee recommends that while it is in sympathy with the spirit of his resolution, yet in view of the fact that a committee on insurance is created by this report to deal with the subject in a broad and comprehensive way, it asks that the resolution be referred to the Committee on Insurance.

Respectfully submitted,

E. ELIOT HARRIS, Chairman.
A. D. PRICE,
W. D. HAGGARD.

On motion of Dr. J. R. Hollowbush, Illinois, the report of the committee was adopted.

Report of Reference Committee on Legislation.

ADOPTION OF LEGISLATION REPORT.

Dr. J. F. Percy read the following report of the Reference Committee on Legislation and Political Action:

We have reviewed the report of the Committee on Medical Legislation (see page 1853) and recommend its adoption. We further recommend that all questions of appropriations referred to in this report be referred to the Board of Trustees with the request that they be acted on promptly.

Respectfully submitted,

J. F. PERCY, Chairman,
WILLIAM E. ANDERSON,
J. R. KEAN.

On motion of Dr. W. T. Sarles, Wisconsin, the report was adopted.

Report of Reference Committee on Education.

COMMITTEE ON RECIPROCITY ABOLISHED.

Dr. Stuart McGuire, Virginia, chairman of the Reference Committee on Medical Education, presented the following report:

Your Reference Committee on Medical Education, to whom have been referred the reports of the Council on Medical Education (see page 1853) and of the Committee on Reciprocity (see page 1868), desires heartily to commend the work that has been done by both bodies.

The Council on Medical Education has made great progress in a most important undertaking. Much remains yet to be accomplished and the work must be continued. We understand from the chairman, Dr. Bevan, that the Council is already formulating a curriculum which, after being submitted to this body for approval, will be recommended to the various schools for adoption. In this connection we wish to recall the fact that the House of Delegates, at the Portland session, by a unanimous vote, advised the incorporation of a special course in medical economics in the curriculum of every school.

In connection with the report of the Committee on Reciprocity, we advise, with the approval of the chairman of the committee, Dr. Rodman, that the various recommendations contained in it be referred to the Council on Medical Education. Inasmuch as the work of the Council and of the committee covers the same ground, we can see no reason for the existence of both. Therefore, to simplify matters, we advise that the Committee on Reciprocity be abolished.

We think the thanks of the Association are due to Dr. Bevan, Dr. Rodman and the various members of the two committees for their faithful and effective work; also to the state boards and medical schools who have co-operated with them in their labors.

Dr. Philip Mills Jones, California, moved that the report with its recommendations be adopted. Seconded.

Dr. J. N. MacCormack, Kentucky, moved to amend that the Council on Medical Education be requested to take the matter up with the schools.

The amendment was seconded, accepted and the original motion as amended was carried.

Report of Committee on Rules.

PROPER CREDENTIALS TO BE REQUIRED.

Dr. J. Garland Sherrill, Kentucky, presented the following report of the Committee on Rules and Order:

Your Committee on Rules and Order begs to report on the Report of the Committee on Credentials (see page 1874) that Book II, Sections 1 to 4, page 9, fully covers the registration of delegates. We, therefore, recommend that the Secretary be asked to notify constituent associations that in the future these rules will be strictly enforced.

J. GARLAND SHERRILL, Chairman.
H. M. WORKMAN.
L. D. WILSON.

On motion, the report was adopted.

Ohio Resolution for Refund to State Journals.

LAID ON TABLE.

Dr. Charles L. Bonifield, Ohio, said that at a meeting of the Ohio State Medical Society, held last month at Canton, the delegates to the American Medical Association were instructed to present the following preambles and resolution:

WHEREAS, THE JOURNAL of the American Medical Association has accumulated a quarter of a million of dollars, thus proving that it does not need its entire income; and

WHEREAS, The state journals are of immeasurable value in maintaining organization; therefore, be it

Resolved, That the Secretary of the American Medical Association is hereby instructed to return to the treasurer of each state society that publishes a journal one dollar for each subscriber to THE JOURNAL of the American Medical Association from his state, and that each secretary of a county society in such a state is made an agent for receiving subscriptions for THE JOURNAL of the American Medical Association.

On motion of Dr. J. Garland Sherrill, Kentucky, these preambles and resolution were laid on the table.

Proposal to Remit Dues of California Sufferers.

APPROVED, BUT LATER RECONSIDERED (See page 1877).

Dr. J. N. MacCormack presented the following:

In view of the great financial loss experienced by the profession of San Francisco in the late earthquake and fire; be it

Resolved, That the dues of the members of this Association residing in San Francisco be remitted for the ensuing year.

It was moved that the resolution be adopted. Seconded.

The Secretary stated that there are other members of the Association who reside in small towns near San Francisco who were affected by the earthquake.

It was therefore moved as an amendment that the Secretary be instructed to investigate individual instances and that the Board of Trustees be requested to remit their dues.

The amendment was seconded and the motion as amended was carried (see page 1877).

Appropriation for Relief of California Sufferers.

VOTED AND LATER MODIFIED (see page 1877).

Dr. F. D. Gray, New Jersey, asked if any action had been taken by the House of Delegates with regard to any other form of relief for the San Francisco sufferers.

The Secretary said there had not.

After further remarks by Dr. Gray, pointing out the importance of voting a cash contribution to the sufferers, Dr. E. Eliot Harris, New York, moved that the House of Delegates appropriate $1,000 for that purpose, and that the matter be referred to the Board of Trustees. Seconded.

Dr. A. F. Jonas, Nebraska, moved to amend that the amount be made $5,000. Seconded.

The motion as amended was accepted, carried, and the matter referred to the Board of Trustees (see page 1877).

Florida Resolutions on Insurance Fees and Nostrums.

REFERRED TO COMMITTEE ON INSURANCE FOR FUTURE USE.

The Secretary read a letter from Dr. Joseph Y. Porter, Florida, presenting the following preambles and resolutions, which were endorsed by the Florida State Medical Association in annual session in Gainesville, Fla., April 19, 1906:

WHEREAS, There is a tendency on the part of old-line or legal reserve life-insurance companies to reduce the minimum fee paid for medical examination to three dollars; and

WHEREAS, It is the unanimous sentiment of the members of the Florida State Medical Association in session at Gainesville, April 19, 1906, that a minimum fee of three dollars is not a just compensation for the services rendered and responsibility assumed: therefore, be it

Resolved, By the Florida State Medical Association, that on and after July 1, 1906, no member of this Association shall make a medical examination for any insurance company, old-line, fraternal or assessment, now licensed to transact business in this state, or any insurance company which may hereafter be licensed to transact business in this state, for less than five dollars an examination, and that an additional fee of five dollars be charged where a microscopic examination is required; and be it further

Resolved, That a copy of this resolution be sent at once to the secretary of each component society for their action, and that said societies after acting on the matter shall forward at once the result of said action to the secretary of the state medical association, who in turn shall notify each secretary of the component medical societies of the final action taken.

On motion these resolutions were referred to the Committee on Insurance that is to be appointed.

Florida Resolutions on Council on Pharmacy.

ACCEPTED AND PLACED ON FILE.

The Secretary likewise read the following, which was adopted by the Florida Medical Association at its annual session, held April 19, 1906:

Resolved, That the Florida Medical Association expresses its hearty approval of the action of the American Medical Association in establishing a Council on Pharmacy and Chemistry to investigate non-official drugs and medicines.

It realizes that such an investigation is necessary to sift out the numerous and rapidly increasing number of worthless and harmful preparations that are being exploited among the physicians of this country. It has confidence in the Council and wishes to support the Trustees of the American Medical Association in carrying on the work already instituted by this body.

The Florida Medical Association also approves the action of THE JOURNAL of the American Medical Association in its campaign of educating the medical profession concerning the evils of nostrums and urges it to continue the good work.

On motion of Dr. E. Eliot Harris, New York, this communication was accepted and placed on file.

Dr. V. H. Stickney, North Dakota, presented a communication, which was referred to the Reference Committee on Miscellaneous Business.

On motion the House of Delegates adjourned to meet at 2 p. m. Thursday.

Fifth Meeting—Thursday, June 7

The House of Delegates met at 2 p. m. and was called to order by the President.

The minutes of the previous meeting were read.

Place of Session Arrangements Amended.

Dr. T. J. Happel, Tennessee, called the attention of the House of Delegates to the by-law adopted at a previous meeting, giving the Board of Trustees the power to change the place of session, and suggested that the words "three months" be changed to read "two months" (see pages 1870 and 1875).

Dr. Alexander R. Craig, Pennsylvania, moved a reconsideration of that part of the report of the Reference Committee on Constitution and By-Laws adopted at a previous meeting.

Carried.

He then moved to substitute the word "two" instead of "three," as suggested by Dr. Happel.

This motion was seconded and carried.

The minutes as amended were adopted.

The election of officers was then proceeded with.

Election of Officers.

Dr. E. Eliot Harris, New York, in nominating Dr. Bryant said:

I rise to present the name of a gentleman as a candidate for President who is the choice of the reunited medical profession of the State of New York and of its delegates sitting in this House.

I do not feel that it is necessary for me to describe his grand and noble traits of character and his high professional attainments to his friends here assembled. They are all well known to you. He needs no eulogy. I shall not ask for the time to deliver a panegyric. The encomiums which have been voiced by his many students and friends are not limited to the State of New York, but extend throughout the length and breadth of this land. They are matters of public record. I have simply the honor, as well as the privilege, to name your candidate for President of the American Medical Association—Dr. Joseph D. Bryant, of New York, or, rather, of the United States of America. [Applause.]

The nomination was seconded by the delegates from several states, after which Dr. T. J. Happel moved that the Secretary be instructed to cast the unanimous ballot of the House of Delegates for Dr. Bryant as President of the Association, which was seconded by several and unanimously carried.

The Secretary, in accordance with instructions, cast the ballot for Dr. Bryant, and he was declared duly elected.

The President appointed as tellers Drs. W. D. Haggard, Tennessee, and Edward B. Heckel, Pennsylvania.

The following officers were duly elected:

First Vice-President, Dr. Herbert L. Burrell, Boston.

Second Vice-President, Dr. Andrew C. Smith, Portland, Ore.

Third Vice-President, Dr. D. S. Fairchild, Des Moines, Iowa.

Fourth Vice-President, Dr. W. S. Foster, Pittsburg, Pa.

General Secretary, Dr. George H. Simmons, Chicago (re-elected).

Treasurer, Dr. Frank Billings, Chicago (re-elected).

Trustees, Dr. M. L. Harris, Chicago (re-elected); Dr. William H. Welch, Baltimore (re-elected); Dr. Miles F. Porter, Fort Wayne, Ind. (re-elected).

[The other members of the Board of Trustees, whose terms of office did not expire, are as follows: T. J. Happel, Chairman, Trenton, Tenn., 1907; W. W. Grant, Denver, 1907; Philip Marvel, Atlantic City, N. J., 1907; E. E. Montgomery, Vice-Chairman, Philadelphia, 1908; A. L. Wright, Carroll, Iowa, 1908; H. L. E. Johnson, Washington, D. C., 1908.]

Member of Judicial Council, Dr. D. C. Peyton, Jeffersonville, Ind. (re-elected).

[The other members of the Judicial Council are: P. Maxwell Foshay, New York, Chairman; George Ben Johnston, Richmond, Va.; W. B. Russ, San Antonio, Texas; W. S. Foster, Pittsburg, Pa.]

Chairman of the Committee on Transportation and Place of Session, John C. Munro, Boston.

[The other members of this committee, as appointed by the President, are named on page 1879.]

Atlantic City the Meeting Place, 1907.

Dr. E. Eliot Harris, New York, stated, on behalf of the Committee on Transportation and Place of Session, that the committee had carefully considered Jamestown, Asbury Park, Chicago and Atlantic City as places for the next session, and that the members of the committee voted unanimously in favor of Atlantic City.

Dr. J. Garland Sherrill, Kentucky, moved that the report be adopted. Seconded.

Time of Next Session Left to Trustees.

After considerable discussion relative to the time of meeting so as not to conflict with the meetings of state medical societies and the Congress of American Physicians and Surgeons, Dr. Frank Billings moved to amend that the Board of Trustees be requested to select a time for the session at Atlantic City either before or immediately after the Congress of American Physicians and Surgeons. Seconded.

Dr. T. J. Happel moved to amend, further, that the date of the next session be fixed not earlier than the middle of June. Seconded.

Dr. E. Eliot Harris, New York, moved as a substitute that the report be adopted and that the time of the session be left to the Board of Trustees.

The substitute was seconded, accepted and carried.

Orators Elected.

The following were elected orators:

Oration on Surgery—Dr. William H. Wathen, Louisville, Ky.

Oration on Medicine—Dr. James B. Herrick, Chicago.

Oration on State Medicine—Dr. Samuel G. Dixon, Philadelphia.

COMMITTEE ON INSURANCE.

John H. Musser, Pennsylvania, Chairman.

William H. Mayo, Minnesota. Joseph D. Bryant, New York.
Jos. N. MacCormack, Kentucky. Frank Billings, Illinois.

Relief for California Sufferers.

METHODS OF RELIEF MODIFIED.

Dr. J. N. MacCormack moved to reconsider the action taken by the House at a previous meeting (see page 1876) with reference to the donation to the sufferers in San Francisco, because, he said, a much more substantial method of relief had been suggested by Dr. Charles A. L. Reed, which met with the concurrence of the Board of Trustees and the delegates from California. Seconded and carried.

Dr. MacCormack then presented the following preambles and resolution, and moved that they be referred to the Board of Trustees:

WHEREAS, The medical profession of San Francisco have suffered irreparable loss, both in property and clientele; and

WHEREAS, It would conflict with the postal laws to remit the dues or subscriptions to THE JOURNAL of the members of this Association in California: therefore, be it

Resolved, That the American Medical Association extends its sympathies to our medical brethren in California and to their families, and pledges them the support of the profession of America in re-establishing themselves on a substantial basis for future usefulness; and, further, in order to give practical and substantial aid, that the Committee on Legislation, through the agencies already established by it, be and is hereby requested to undertake the creation of a fund, which, together with that already contributed through THE JOURNAL, shall amount to $50,000, which shall be used for the benefit of the reputable physicians of California by the committees of the California State Association and of the San Francisco County Medical Association established for that purpose.

After discussion it was moved to amend that the $5,000 appropriated yesterday stand, that the resolution as amended be adopted and that the members of the Committee on Medical Legislation raise as much money as they can. Seconded.

Dr. MacCormack accepted the amendment, and the resolution as amended was adopted.

Resolutions on Behalf of Contract Army Surgeons.

REFERRED TO COMMITTEE ON MISCELLANEOUS BUSINESS.

Dr. J. F. Percy, Illinois, presented the following preambles and resolutions, which were submitted by Dr. John P. Nagle, New York.

WHEREAS, The War Department has employed and now employs physicians by contract to perform the duties of medical officers, and these physicians are required to share the same risks and responsibilities as the commissioned medical officers, but are deprived of any rank while so employed; and

WHEREAS, General Orders of the War Department, Adjutant-General's Office, dated Feb. 13, 1900, gave a list of surgeons who served in the Spanish-American War who especially distinguished themselves by meritorious acts or conduct in service, and of this number two were acting assistant surgeons of the Army, two were commissioned medical officers and one was a civilian volunteer medical aid; and

WHEREAS, Dr. E. K. Johnston, an acting assistant surgeon of the Army, was commended by Major-General W. H. Lawton, commanding the First Division, U. S. Volunteers, at Manila, P. I., on Dec. 18, 1899, for exceptional daring during the battle of Zapote River, and was recommended for promotion as major or brigade surgeon; and

WHEREAS, Five thousand five hundred and thirty-two of the 12,000 members of the medical staff of the Army who served in the Civil War were acting assistant surgeons of the Army, many of whom distinguished themselves as physicians and surgeons and performed gallant and meritorious services, but are refused recognition for the services they have performed and are discriminated against by the War Department for no other reason than that they are or were acting assistant surgeons of the Army and, consequently, had and have no rank of office, although they were always under military orders, Army regulations and the articles of war: therefore, be it

Resolved, That this American Medical Association protests against the employment of physicians and surgeons in the Army by contract, without rank, to perform the duties of medical officers, and requests the President of the United States, who is commander-in-chief of the Army, and the Secretary of War to prevent such employment.

Resolved, That it is the sense of this Association that all physicians and surgeons who are and who have been employed by contract with the Army, and who have performed and are now performing the duties of medical officers, should be commissioned as acting assistant surgeons of the United States Army, with rank similar to the acting assistant surgeons of the United States Army.

On motion of Dr. W. D. Haggard, Tennessee, the resolutions were referred to the Reference Committee on Miscellaneous Business.

Resolutions on Ophthalmia Neonatorum Adopted.

Dr. H. V. Würdemann, Wisconsin, presented the following preambles and resolutions, which were unanimously passed by the Section on Ophthalmology and referred to the House of Delegates for action:

WHEREAS, Notwithstanding the long-continued efforts of the medical profession to make known generally the infectious character of ophthalmia neonatorum and its danger to sight, the ranks of the blind are still largely increased annually by those who have unnecessarily lost their vision as a result of this disease; and

WHEREAS, We possess in the silver salts an almost absolute specific for its prevention and treatment: therefore, be it

Resolved, That this Section recommends that a committee consisting of at least one ophthalmologist, one obstetrician and one sanitarian, with the invited co-operation of a subcommittee, consisting of the president and secretary of each state society, be appointed by the President of the Association to formulate and make effective the details of a plan that may give uniform legislation and definite instruction to the profession and laity concerning the prevention and treatment of this disease.

Resolved, That this Section recommends an ophthalmologist for such committee, to be appointed by the incoming chairman and the executive committee.

On motion the resolutions were adopted.

Wish The Journal Free to Medical Libraries.

REFERRED TO TRUSTEES.

Dr. A. Jacobi, New York, said he was delegated to present the following report:

The following preambles and resolutions were passed at the ninth annual meeting of the Association of Medical Librarians, held June 4, 1906, at The Fenway, Boston:

WHEREAS, The American Medical Association, in convention assembled at Denver, in 1898, passed a unanimous resolution placing the names of the medical libraries which are members of the Association of Medical Librarians on the free mailing list of THE JOURNAL of the American Medical Association; and

WHEREAS, The removal of these names from the free mailing list of THE JOURNAL at the end of the year 1903 has been a severe loss, especially to many of the smaller libraries; be it

Resolved, That the governing body of the American Medical Association be petitioned to restore to the free mailing list of THE JOURNAL of the American Medical Association the names of the libraries which are members of the Association of Medical Librarians; and be it further

Resolved, That Dr. A. Jacobi be a committee of one to present this matter before the governing body of the American Medical Association.

On motion of Dr. Alexander R. Craig, Pennsylvania, these resolutions were referred to the Board of Trustees with instructions that the request be granted.

Report of Davis Memorial Committee.

ACCEPTED AND COMMITTEE CONTINUED.

Dr. Henry O. Marcy, Boston, reported progress as chairman of the Nathan Smith Davis Memorial Committee.

Dr. T. J. Happel moved that the report be accepted, that Dr. Marcy be continued as chairman of the committee and that Dr. William E. Quine, Chicago, be made vice-chairman and requested to assist actively in this work. Seconded and carried.

Dr. E. D. Ferguson, New York, moved that the chairman of the committee, Dr. Marcy, and his coadjutors in the city of Chicago be authorized to appoint a secretary and treasurer of the committee and that Dr. Frank Billings be made treasurer.

This motion was seconded and carried.

Report of Committee on Cancer of the Uterus.

APPROVED AND FURTHER WORK AUTHORIZED.

Dr. F. F. Simpson, Pittsburg, presented the report of the Committee on Cancer of the Uterus:

In the consideration of cancer of the uterus your committee has been impressed by the urgent need of a general plan of public education on many medical subjects. While the Section of Obstetrics is naturally interested in promoting some effective means of reducing the frightful mortality in cancer of the uterus, each section of the American Medical Association is quite as intensely interested in similar work pertaining to matters of public health falling within its province. The needs of the hour seem to demand some ethical way of instructing the people in general regarding these several subjects. It is apparent that to be effective such instruction must be authoritative, systematic, painstaking, persistent, free from technical terms, free from suspicion of personal advancement, and it must reach the people through popular channels. For these reasons your committee has felt the necessity of widening the scope of its duties and herewith respectfully submits to the House of Delegates a plan for the organization of a General Board of Public Instruction:

SYNOPSIS OF A PLAN FOR THE ORGANIZATION OF A DEPARTMENT OF PUBLIC INSTRUCTION BY THE ASSOCIATION.

Objects.—To supply the community at large with established facts regarding matters of general moment and public health. To supply these facts ethically, in good taste and without the element of individual advancement. To harmonize and give the added value of combined effort to the several interests which are now working independently for the common good along medical lines. To direct this work under the auspices of the American Medical Association, thus giving unity of purpose among the workers and public expression to the aim and aspirations of the medical profession of America.

Organizations.—To further these aims a General Board of Instruction shall be composed of five representatives each from the Sections on Practice of Medicine, on Surgery and Anatomy and on Hygiene and Sanitary Science, and three representatives from each of the other sections of the American Medical Association. The members of the General Board of Instruction from each special section shall constitute the special board of instruction for the sections they represent.

Manner of Selection and Duration of Office.—The members of this board shall be appointed by the chairman of each section, the term of office being five years for the members of the Sections on Practice of Medicine, on Surgery and Anatomy and on Hygiene and Sanitary Science, and three years for each of the other sections of the American Medical Association. The tenure of office shall be so arranged that one new member shall be appointed annually from each section, thus preserving the individuality of the general constitution of the board and insuring a uniform continuity of purpose.

Selection of Subjects.—The discussion of many subjects should, of course, be restricted to the medical profession, but in order to direct uniform attention to them the board of instruction may consider that they merit special articles or circular letters, under separate cover, to the entire medical profession. Other subjects of value to the general public should be given publicity through the lay press or other popular channels of education. The section of the Board of Public Instruction, under whose jurisdiction the subject properly belongs, presents the subject to the general board, which shall finally decide on the propriety of its publication.

The Number of Articles to Appear.—This is to be determined by the appropriate special board. On consideration by the general board, however, the number may be curtailed, or their publication may be stopped at any time if it deem it wise.

Character of Articles.—This is to be determined by the special board having jurisdiction, but the final decision as to their publication or the channel through which they shall appear may be subject to the suggestion of and controlled by the general board. One essential feature of these articles is that there shall be the least possible reference, direct or implied, to any person or institution, in order that there may be no imputation, either direct or indirect, that the function of the board is employed for the promotion of individual advancement. Each article must be actually read by at least two-thirds of the appropriate special board and by three members of the general board. Each article shall receive the unanimous sanction of the special board and a majority of the general board before it may appear in public print.

Source of Articles.—So far as the public is concerned, each article shall be "approved by the American Medical Association," but shall not bear the name of the individual writer. The actual writers of the several articles must be selected carefully by the appropriate special boards, in order that the most authoritative information may be given to the public.

The avenues of distribution are to be determined by the General Board of Public Instruction. Articles for the general instruction of the public shall be published in conservative periodicals or magazines devoid of sensational basis, and which will honorably conform to the requirements of medical ethics. Another effective method of instruction shall be by lectures in public and private schools, in colleges and other institutions of learning. Public lectures on certain topics may well be conducted under the auspices of local county medical societies, before literary clubs, college settlements, etc.

If a plan of this general nature is inaugurated, your committee believes that the logical evolution may be a department of public instruction, which ultimately would have a very powerful function in the collection and dissemination of scientific, sociologic and statistical facts for the use of the medical profession and the instruction of the general public, thus rendering inestimable benefit to mankind. If the value of this work were established, as we believe is possible, it might logically lead to the establishment by our national government of an executive department encompassing all of these aims. Before our government can be induced to assume this responsibility it must be convinced of its need by actual demonstration. We believe such a scheme as this, if put into action, may bring about this much desired end.

In the absence of specific authority to act, your committee has refrained from the investigation of several facts. Among them may be mentioned the attitude of publishers to the ethical side of our problem; the cost of maintenance of a department; the manner of raising funds; the establishment of an endowment fund, etc.

We would, therefore, respectfully suggest that a committee be appointed to investigate these and other germane problems and that it make a definite report for adoption at the next session of this Association.

JOHN G. CLARK, Chairman.
THOMAS S. CULLEN. J. CLARENCE WEBSTER.
JOHN A. SAMPSON. F. F. SIMPSON.

Dr. Daniel H. Craig, Boston, moved that the report of the committee be adopted and that the President appoint at his con-

venience a committee of seven to investigate the matters suggested and to report for definite action at the next annual session. Carried.

Supplemental Report of the Board of Trustees.

Dr. T. J. Happel, chairman, presented the following supplemental report of the Board of Trustees:

To the House of Delegates of the American Medical Association:

Your Board of Trustees would submit the following supplemental report:

We have appropriated as follows:

ASSOCIATION EXPENSES.

Committee on Education, not to exceed	$ 4,000.00
Council on Pharmacy and Chemistry, not to exceed	3,500.00
Committee on Medical Legislation, not to exceed	1,000.00
Committee on Scientific Research	800.00
Secretaries of Sections	600.00
Scientific Exhibit	500.00
National Organizer's salary	5,000.00
Secretary Board of Trustees	100.00
Treasurer of the American Medical Association	200.00
Total Association expense account, not including traveling expenses of the organizer	$15,700.00

JOURNAL ACCOUNT.

New printing press	$20,000.00

SPECIAL APPROPRIATIONS.

San Francisco sufferers	$ 5,000.00
Total	$40,700.00

Taking the profits of last year in THE JOURNAL office as a basis of estimate, the House of Delegates will readily see that our reserve fund will be encroached on.

This appropriation of $5,000 to the San Francisco physicians is payable to the order of the Physicians' Relief Committee of that city, to be distributed by them. We would add that while this item will afford but a little help to each physician, still it must not be forgotten that there has been sent out through THE JOURNAL office already more than $10,000 on the collection which was authorized by your Board of Trustees.

In regard to the amount granted to the Committee on Medical Legislation, we desire to explain as follows: As suggested at Portland and ordered at this session, the business of this committee will be carried on in THE JOURNAL office under proper managerial administration, and in this way we hope to lessen the expenses of the same. T. J. HAPPEL, Chairman.
M. L. HARRIS, Secretary.

On motion of Dr. John B. Roberts the report was adopted.

Reports, Resolutions, Etc., to Be in Duplicate.

TYPEWRITIST FOR COMMITTEEMEN.

Dr. Happel presented the following preamble and resolution:

WHEREAS, Reports and resolutions presented to this body are referred to reference committees, to the Board of Trustees, etc.; therefore, be it

Resolved, That in future all reports, resolutions, amendments to the Constitution and By-Laws, etc., be furnished in duplicate, one copy to be furnished the Secretary for the official minutes and the other to committeemen; and that the Secretary be instructed to engage a typewritist for the use of committeemen in making their reports.

On motion the resolution was adopted.

Announcement of Committees.

The President announced the appointment of the following committees:

COMMITTEE ON SCIENTIFIC EXHIBIT.

F. B. Wynn, Indianapolis, Director.

COMMITTEE ON SCIENTIFIC RESEARCH.

Alfred Stengel, Philadelphia, Chairman.
L. F. Barker, Baltimore. L. Hektoen, Chicago.

COMMITTEE ON ORGANIZATION.

J. N. MacCormack, Bowling Green, Ky., Chairman.
Duncan Eve, Nashville. George H. Simmons, Chicago.

COMMITTEE ON MEDICAL LEGISLATION.

Charles A. L. Reed, Cincinnati, Ohio, Chairman (three years).
W. L. Rodman, Philadelphia. William H. Welch, Baltimore.
(One year.) (Two years.)

VOTE OF THANKS TO DR. REED.

Dr. MacCormack moved that the House of Delegates tender to Dr. Reed its thanks for the efficient manner in which he has conducted this work, and that the nomination of Dr. Reed for three years as chairman of the Committee on Medical Legislation be confirmed by a rising vote as an appreciation of his invaluable work. Carried unanimously.

COMMITTEE ON TRANSPORTATION AND PLACE OF SESSION.

John C. Munro, Boston, Chairman.
E. Eliot Harris, New York. W. A. Jayne, Denver.
Philip Mills Jones, San Francisco. Wm. H. Wathen, Louisville, Ky.

JUDICIAL COUNCIL.

P. Maxwell Foshay, Chicago, Chairman.
W. S. Foster, Pittsburg, Pa. D. C. Peyton, Jeffersonville, Ind.
Geo. Ben Johnson, Richmond, Va. W. B. Russ, San Antonio, Texas.

COUNCIL ON MEDICAL EDUCATION.

Arthur D. Bevan, Chicago, Chairman.
W. T. Councilman, Boston. J. A. Witherspoon, Nashville, Tenn.
Charles A. Frazier, Philadelphia. V. C. Vaughan, Ann Arbor Mich.

COMMITTEE ON AWARD OF SENN MEDAL.

A. F. Jonas, Omaha, Chairman.
Harry M. Sherman, San Francisco. J. F. Binnie, Kansas City, Mo.

COMMITTEE ON IMPROVEMENT OF THE TREATMENT OF UTERINE CANCER.

John G. Clark, Philadelphia, Chairman.
F. F. Simpson, Pittsburg. W. D. Haggard, Nashville, Tenn.
J. W. Bell, Minneapolis. Willard Bartlett, St. Louis.
Stuart McGuire, Richmond, Va. Henry Sewall, Denver.

COMMITTEE ON DAVIS MEMORIAL.

Henry O. Marcy, Boston, Chairman.
Wm. E. Quine, Chicago, Vice-Chairman.

Alabama, Eugene D. Bondurant, Mobile; Arkansas, C. C. Stephenson, Little Rock; Arizona, John W. Foss, Phoenix; California, R. F. Rooney, Auburn; Colorado, J. M. Blaine, Denver; Connecticut, N. E. Wordin, Bridgeport; Delaware, Alexander Lowber, Wilmington; District of Columbia, Joseph T. Johnston, Washington; Florida, J. D. Fernandez, Jacksonville; Georgia, Lewis H. Jones, Atlanta; Idaho, G. M. Waterhouse, Weiser; Illinois, E. C. Dudley, Chicago; Indiana, D. C. Peyton, Jeffersonville; Indian Territory, V. Berry, Wetumka; Iowa, William Jepson, Sioux City; Kansas, Charles E. Bowers, Wichita; Kentucky, John G. Cecil, Louisville; Louisiana, Charles Chassaignac, New Orleans; Maine, R. D. Bibber, Bath; Maryland, John Ruhräh, Baltimore; Massachusetts, Henry O. Marcy, Boston; Michigan, H. O. Walker, Detroit; Minnesota, Alexander J. Stone, St. Paul; Missouri, N. B. Carson, St. Louis; Mississippi, E. H. Martin, Clarksdale; Montana, Donald Campbell, Butte; Nebraska, A. F. Jonas, Omaha; New Hampshire, Granville P. Conn, Concord; Nevada, J. E. Pickard, Virginia City; New Jersey, Edward J. Ill, Newark; New York, C. G. Stockton, Buffalo; North Carolina, E. G. Register, Charlotte; North Dakota, Paul Sorkness, Fargo; New Mexico, P. G. Cornish, Albuquerque; Ohio, Frank Winders, Columbus; Oklahoma, J. A. Hatchett, El Reno; Oregon, H. W. Coe, Portland; Pennsylvania, James M. Anders, Philadelphia; Rhode Island, Stephen A. Welch, Providence; South Carolina, T. P. Whaley, Charleston; South Dakota, A. H. Bowman, Deadwood; Tennessee, Duncan Eve, Nashville; Texas, J. T. Wilson, Sherman; Utah, Union Worthington, Salt Lake City; Vermont, M. L. Chandler, Barre; Virginia, W. E. Anderson, Farmville; Washington, George W. Libby, Spokane; West Virginia, W. W. Golden, Elkins; Wisconsin, Arthur J. Burgess, Milwaukee; Wyoming, G. L. Strader, Cheyenne.

Foreign Visitors Honored.

The Section on Obstetrics and Diseases of Women submitted the nomination of Prof. A. von Rosthorn, of Heidelberg, for honorary membership, and on motion the nomination was confirmed.

On motion of Dr. Chassaignac, New Orleans, Professor Trendelenburg, Leipsic, Germany, was elected to honorary membership.

Message to Senator Hepburn.

Dr. Frank Billings called attention to the illness of Senator Hepburn, who drafted and introduced the pure-food bill, and moved that the President and Secretary be instructed to send a telegram expressing respect for him and extending the sympathy of the Association to him in his illness, with hopes for a speedy recovery. Carried.

Resolutions from Section on Hygiene.

A DEPARTMENT OF PUBLIC HEALTH DESIRED.

Dr. J. Walter Suiter, New York, presented the following preambles and resolutions which were unanimously adopted by the Section on Hygiene and Sanitary Science and referred to the House of Delegates:

WHEREAS, The rapidly increasing number and the scope of the sanitary problems constantly arising are of great importance to the growth and development of this country as well as its outlying dependencies; and

WHEREAS, Such problems require for their solution the most experienced and best trained sanitary talent, it follows that it is especially desirable that our Chief Executive have in his immediate presence a medical adviser, eminent and experienced in sanitary science, to counsel him at all times and thus lighten his responsibility in deciding on matters of far-reaching importance which so profoundly affect the lives and health of many millions of people for either good or ill; therefore, be it

Resolved, By the Section on Hygiene and Sanitary Science of the American Medical Association, that we ask the House of Delegates to take immediate and appropriate action which may bring before the Congress of the United States, as a means of materially advancing the prosperity and well-being of this nation, the impor-

tance and necessity of creating a Department of Public Health, with a regularly educated physician as secretary in the Cabinet of the President.

Resolved, further, That the secretary of this Section be authorized and directed to call the attention of all state boards and health commissioners of the larger American cities to the purport of these resolutions and to solicit their active co-operation to the end that suitable legislation may result in the furtherance of the object of the resolution.

On motion of Dr. Charles L. Bonifield, Ohio, the resolutions were referred to the Committee on Medical Legislation.

RESOLUTION ON THE HEALTHFULNESS OF CONTINENCE.

WHEREAS, There exists among the laity a general impression that sexual intercourse is necessary to the health of men; and

WHEREAS, It is claimed that this impression rests on the authority of the medical profession; now, therefore, be it

Resolved, That in the opinion of the Section on Hygiene and Sanitary Science of the American Medical Association, continence is not injurious to health, and that this Section reprobates the contrary doctrine as a menace to the physical and moral welfare of the individual and society.

PRINCE A. MORROW.

On motion this resolution was referred to the Committee on Improvement of the Treatment of Uterine Cancer.

RESOLUTION ON EDUCATION CONCERNING VENEREAL DISEASE.

Resolved, That it is the opinion of the Section on Hygiene and Sanitary Science of the American Medical Association that it should be the duty of state boards of health to disseminate literature to educate the people on the subject of the great black plague (venereal disease) as they do regarding tuberculosis and other infectious diseases.

LISTON H. MONTGOMERY.

On motion this resolution was referred to the same committee.

RESOLUTION ON MAKING VENEREAL DISEASE REPORTABLE.

Resolved, That in the opinion of the Section on Hygiene and Sanitary Science of the American Medical Association, gonorrhea, chancroid and syphilis should be included among diseases to be under the control of boards of health of the different states.

L. DUNCAN BULKLEY.

Referred to the same committee.

Dr. J. C. Hall, Mississippi, presented the following resolution, which was referred to the same committee as the previous resolutions:

Resolved, That the Mississippi State Medical Association believes that continence is compatible with health, and reprobates the contrary doctrine as a menace to the physical and moral welfare of the individual and of society.

Annual Meetings of State Societies.

Dr. Frank Billings said that at a former session of the House of Delegates the Committee on Organization presented a resolution, which was adopted, recommending that the constituent state medical societies hold their annual meetings, as near as possible, in the fall instead of in the spring. He reiterated that resolution and moved that the constituent societies be requested to hold their annual meetings in the fall. Carried.

Trustee May Not Be State Delegate.

AMENDMENT TO LIE OVER ONE YEAR.

Dr. Alexander R. Craig, Pennsylvania, offered, on behalf of the Reference Committee on Constitution and By-Laws, the following amendment:

Constitution—Article V—Section 1 (page 2, line 4 of the section) —after the words "constituent associations" insert "provided, however, that no constituent association may be represented in the House of Delegates by a member of the Board of Trustees of the American Medical Association." (To lie over until next year.)

Medical Journals and Nostrum Advertisements.

Dr. E. Eliot Harris, New York, offered the following resolution:

Resolved, That the committees on publication of the journals of medicine published by the state medical associations affiliated with this body be asked to assist the Board of Trustees in their effort to suppress the advertisement of medical nostrums and to co-operate in the work of securing pure-food and pure-drug laws in the United States.

On motion of Dr. C. E. Cantrell, Texas, the resolution was adopted.

Report of Committee on Reapportionment.

Dr. George W. Guthrie, Pennsylvania, presented the following report of the Committee on Reapportionment:

The Committee on Reapportionment begs leave to report that it has examined the certificates of membership of the constituent state associations and finds that a reapportionment of delegates on a basis of one delegate to every 500 members would constitute a House of Delegates of 147 members. Inasmuch as Section 3, Chapter 4, Book 2, of the By-Laws places a limit of 135 members to this House, we therefore recommend that the reapportionment for the years 1907, 1908 and 1909 be on the basis of one delegate to every 600 members, giving a membership from constituent state associations of 127, distributed as follows:

MEMBERSHIP FROM CONSTITUENT ASSOCIATIONS.

	No. Delegates 1903-06.	Cert. Memb. 1906.	No. Delegates on 500 basis.	No. Delegates on 600 basis.	Change.
Alabama	3	1,370	3	3	..
Arizona	1	104	1	1	..
Arkansas	2	766	2	2	..
California	4	1,783	4	3	—1
Colorado	2	716	2	2	..
Connecticut	2	780	2	2	..
Delaware	1	104	1	1	..
District of Columbia.	1	484	1	1	..
Florida	1	281	1	1	..
Georgia	2	1,020	3	2	..
Hawaii	1	63	1	1	..
Idaho	1	75	1	1	..
Illinois	8	4,087	9	7	—1
Indian Ter.	1	....	..	..	1
Indiana	4	2,109	5	4	..
Iowa	4	1,719	4	3	—1
Kansas	2	1,202	3	3	+1
Kentucky	3	1,620	4	3	..
Louisiana	2	746	2	2	..
Maine	1	486	1	1	..
Maryland	2	929	2	2	..
Massachusetts	6	3,044	7	6	..
Michigan	4	1,966	4	4	..
Minnesota	2	1,105	5	2	..
Mississippi	2	930	2	2	..
Missouri	3	2,235	5	4	+1
Montana	1	175	1	1	..
Nebraska	2	714	2	2	..
New Hampshire	1	403	1	1	..
New Jersey	3	1,228	3	3	..
New Mexico	1	123	1	1	..
New York	10	6,378	13	11	+1
Nevada	1	53	1	1	..
North Carolina	2	1,242	3	3	+1
North Dakota	1	207	1	1	..
Ohio	5	3,482	7	6	+1
Oklahoma	1	676	2	2	+1
Oregon	1	332	1	1	..
Pennsylvania	8	4,574	10	8	..
Rhode Island	1	322	1	1	..
South Carolina	1	659	2	2	+1
South Dakota	1	245	1	1	..
Tennessee	3	1,055	3	2	—1
Texas	5	2,630	6	5	..
Utah	1	130	1	1	..
Vermont	1	416	1	1	..
Virginia	3	1,413	3	3	..
Washington	1	507	2	1	..
West Virginia	2	597	2	1	—1
Wisconsin	3	1,395	3	3	..
Wyoming	1	62	1	1	..
Philippine Islands	1	57	1	1	..
	126	58,859	147	127	Net gain 1.

This provides for the same representation as at present for 40 out of 52 state associations. In 6 cases the representation is diminished by one delegate, as follows: California, Tennessee, Illinois, Indian Territory, West Virginia, Iowa. In 7 states the representation is increased by one delegate each, as follows: Kansas, North Carolina, Missouri, Ohio, Oklahoma, New York, South Carolina.

This makes the membership of the House from state associations for the years of 1907, 1908 and 1909, 128. To this must be added the fifteen members from sections and army services, making a total membership of 143.

Respectfully submitted.

W. J. MAYO, GEORGE A. GUTHRIE,
G. H. SIMMONS, FRANK D. BAIN,
N. J. MILLER.

Dr. Alexander R. Craig moved the adoption of the report. Seconded.

Dr. Frank Billings moved to amend that the thanks of the House of Delegates be extended to the committee for its efficient work.

The amendment was seconded, accepted, and the original motion as amended was carried.

Oregon and Insurance Examination Fees.

Dr. Henry Waldo Coe, Portland, Ore., reported in relation to the insurance examination fee matter that the Oregon State Medical Society has recently passed a resolution directing its members not to accept the reduced fees for insurance examinations under penalty of expulsion from the society.

He said that this resolution was passed unanimously and with much enthusiasm.

On motion the resolution was referred to the Insurance Committee.

Extermination of Mosquitoes.

The Secretary read a telegram from the American Mosquito Extermination Society with reference to methods of destruction of mosquitoes, and on motion the communication was referred to the Reference Committee on Hygiene and Public Health.

Tropical Medicine Section Asked.

Dr. M. Herzog, Philippine Islands, moved that the President appoint a committee to consider the advisability of creating a section on tropical medicine and to report on it at the next annual session of the Association. Seconded and carried.

Vote of Thanks to Boston.

Dr. E. D. Martin, Louisiana, offered the following preambles and resolution:

WHEREAS, This is the largest session ever held in the history of the American Medical Association; and

WHEREAS, The profession of the city of Boston and its citizens have not only been untiring in their efforts, but have shown their ability to handle its membership and visitors in such a manner as to have given the most general satisfaction; and

WHEREAS, The entertainments have been so continuous and so grand as to excel all heretofore given: be it

Resolved, That the members of the Association and their guests desire hereby to express their thanks to the physicians of Boston, the governor, mayor, citizens, and especially to the ladies, for their untiring efforts in doing all that was possible to make our visit to this grand old city one never to be forgotten. We wish to include further in this resolution all institutions which have so kindly opened their doors to us and thereby added so much to our visit.

On motion of Dr. Billings the resolution was adopted unanimously.

The President called for the report of the Judicial Council, but as none of the members was present the report was passed.

Amendment to By-Laws.

Dr. J. N. MacCormack presented the following amendment:

Amend Section 5—Chapter X—Book III of the By-Laws, page 18, by striking out all of the first sentence after the words "five members" and inserting in lieu thereof the words "to be appointed by the President on the first day of each annual session from the delegates present, and to continue in office until their successors are appointed." (To lie over until next year.)

Dr. Frank Billings moved that the thanks of the House of Delegates be extended to the ex-President and to the present officers for the efficient way in which they have presided over the meetings. Seconded.

Dr. Billings put the motion and it was carried unanimously.

There being no further business to come before the House, on motion of Dr. E. Eliot Harris the House of Delegates then adjourned without date.

Members of House of Delegates in Attendance

ALABAMA.

Wm. H. Sanders, Montgomery.
J. D. S. Davis, Birmingham.
I. L. Watkins, Montgomery.

ARIZONA.

Clarence E. Yount, Prescott.

ARKANSAS.

R. K. Williams, Arkadelphia.
H. H. Canfield, Siloam Springs.

CALIFORNIA.

Phillip Mills Jones, San Francisco.
H. Bert Ellis, Los Angeles.
G. F. Reinhardt, Berkeley.

COLORADO.

D. Hubert Work, Pueblo.
P. F. Gildea, Colorado Springs.

CONNECTICUT.

George R. Shephard, Hartford.

DELAWARE.

Frank Belville, Delaware City.

DISTRICT OF COLUMBIA.

George N. Acker, Washington.

FLORIDA.

J. Y. Porter, Key West.

GEORGIA.

H. F. Harris, Atlanta.
T. P. Waring, Savannah.

ILLINOIS.

George W. Webster, Chicago.
O. B. Will, Peoria.
Charles L. Mix, Chicago.
D. G. Smith, Elizabeth.
Frank Billings, Chicago.
J. R. Hollowbush, Rock Island.
J. F. Percy, Galesburg.
L. C. Taylor, Springfield.

INDIANA.

William M. Wishard, Indianapolis.
Charles H. Emery, Bedford.
John B. Berteling, South Bend.
A. M. Hayden, Evansville.

INDIAN TERRITORY.

Fred S. Clinton, Tulsa.

IOWA.

W. L. Bierring, Iowa City.
E. E. Dorr, Des Moines.
William Jepson, Sioux City.

KANSAS.

W. T. McKay, Arkansas City.

KENTUCKY.

J. Garland Sherrill, Louisville.
J. N. MacCormack, Bowling Green.
A. D. Price, Harrodsburg.

LOUISIANA.

Charles Chassaignac, New Orleans.
E. D. Newell, St. Joseph.

MAINE.

Edwin M. Fuller, Bath.

MARYLAND.

Randolph Winslow, Baltimore.
S. B. Earle, Baltimore.

MASSACHUSETTS.

G. W. Gay, Boston.
Walter P. Bowers, Clinton.
Frank G. Wheatley, N. Abington.
Charles H. Williams, Boston.
Reginald H. Fitz, Boston.
John L. Hildreth, Cambridge.

MICHIGAN.

Leartus Connor, Detroit.
H. O. Walker, Detroit.
V. C. Vaughan, Ann Arbor.

MINNESOTA.

T. McDavitt, St. Paul.
H. M. Workman, Tracy.

MISSISSIPPI.

John Darrington, Yazoo.
J. C. Hall, Augulla.

MISSOURI.

J. N. Jackson, Kansas City.
W. B. Dorsett, St. Louis.
O. B. Campbell, St. Joseph.

MONTANA.

Donald Campbell, Butte.

NEBRASKA.

R. C. Moore, Omaha.
I. N. Pickett, Odell.

NEW HAMPSHIRE.

John M. Gile, Hanover.

NEW JERSEY.

L. M. Halsey, Williamstown.
Charles J. Kipp, Newark.
Frank D. Gray, Jersey City.

NEW MEXICO.

B. D. Black, Las Vegas.

NEW YORK.

Everard D. Ferguson, Troy.
Joseph W. Grosvenor, Buffalo.
E. Eliot Harris, New York.
Abraham Jacobi, New York.
W. R. Townsend, New York.
Floyd M. Crandall, New York.
Henry L. Elsner, Syracuse.
Roswell Park, Buffalo.
Hamilton D. Wey, Elmira.
Albert Vander Veer, Albany.
A. T. Bristow, Brooklyn.
W. S. Ely, Rochester.

NORTH CAROLINA.

W. J. Lumsden, Elizabeth City.

NORTH DAKOTA.

V. H. Stickney, Dickinson.

OHIO.

A. B. Walker, Canton.
J. S. Beck, Dayton.
J. A. Kimmell, Findlay.
Frank D. Bain, Kenton.
C. L. Bonifield, Cincinnati.

OKLAHOMA.

J. A. Hatchett, El Reno.

OREGON.

H. W. Coe, Portland.

PENNSYLVANIA.

Alexander R. Craig, Columbia.
George W. Guthrie, Wilkesbarre.
Edward B. Heckel, Pittsburg.
Fremont W. Frankhauser, Reading.
John B. Roberts, Philadelphia.
W. L. Rodman, Philadelphia.
J. B. Donaldson, Canonsburg.

PHILIPPINE ISLANDS.

M. Herzog.

RHODE ISLAND.

John Champlin, Westerly.

SOUTH CAROLINA.

J. H. Hamilton, Union.

SOUTH DAKOTA.

Rodell C. Warne, Mitchell.

TENNESSEE.

T. J. Happel, Trenton.
W. J. Miller, Johnson City.
W. D. Haggard, Nashville.

TEXAS.

C. E. Cantrell, Greenville.
Frank Paschal, San Antonio.
E. H. Carey, Dallas.
T. F. Kittrell, Texarkana.
C. H. Harris, Fort Worth.

UTAH.

F. W. Taylor, Provo.

VERMONT.

M. K. Crain, Rutland.

VIRGINIA.

J. A. Gale, Roanoke.
William E. Anderson, Farmville.
Stuart McGuire, Richmond.

WASHINGTON.

James R. Yokum, Tacoma.

WEST VIRGINIA.

L. D. Wilson, Wheeling.

WISCONSIN.

W. T. Sarles, Sparta.
L. F. Bennett, Beloit.
B. M. Caples, Waukesha.

PATHOLOGY AND PHYSIOLOGY.

Joseph McFarland, Philadelphia.

OBSTETRICS AND DISEASES OF WOMEN.

Daniel H. Craig, Boston.

HYGIENE AND SANITARY SCIENCE.

H. W. Dewey, Tacoma, Washington.

PHARMACOLOGY AND THERAPEUTICS.

Heinrich Stern, New York.

OPHTHALMOLOGY.

H. V. Würdemann, Milwaukee.

SURGERY AND ANATOMY.

A. F. Jonas, Omaha.

NERVOUS AND MENTAL DISEASES.

J. H. McBride, Pasadena, Cal.

DISEASES OF CHILDREN.

C. F. Wahrer, Fort Madison, Ia.

U. S. ARMY.

J. R. Kean.

U. S. NAVY.

Phillips A. Lovering, Washington, D. C.

U. S. P. H. and M. H. SERVICE.

R. M. Woodward, Boston.

OFFICIAL MINUTES—GENERAL MEETINGS

First General Meeting— Tuesday, June 5

The meeting was called to order by the President, Dr. Lewis S. McMurtry of Louisville, Kentucky, at 10:30 a. m., in Mechanics' Hall.

Approximately six thousand people—physicians, their wives, daughters and guests—attended the meeting. Pink and white bunting formed a sky of color overhead, and American flags draped the platform.

Just before 11:30 the officers of the Association, members of the Local Committee on Arrangements, etc., marched into the hall and up the central aisle to the platform. Two policemen preceded the procession to clear the way, followed by a band. Then came Governor Guild, escorting the venerable chaplain of the United States Senate, Rev. Dr. Edward Everett Hale. At the sight of this distinguished couple the entire audience rose to their feet. Then handkerchiefs were waved and this was followed by loud applause. Mayor Fitzgerald was escorted by Dr. Arthur T. Cabot, president of the Massachusetts State Medical Society, and among others in the procession were the President, Dr. Lewis S. McMurtry, the President-elect, Dr. William J. Mayo, of Rochester, Minnesota; Dr. Herbert L. Burrell, Chairman of the Local Committee of Arrangements; Drs. George B. Shattuck, Frank B. Harrington, Reginald H. Fitz, Elliot B. Joslin, Chas. Harrington, J. Collins Warren, John C. Munro, Alonzo Garcelon, Chas. S. Minot, the Vice-Presidents and the Secretary of the Association, and several of the ex-Presidents.

President McMurtry called the vast throng to order and introduced Rev. Edward Everett Hale, who invoked Divine blessing.

At the conclusion of prayer, President McMurtry said:

"The American Medical Association is honored this morning by the presence here at these exercises of the governor of this great commonwealth. I regret to say, that the governor's official duties necessitate his leaving the platform immediately on the delivery of his address; otherwise it would be his pleasure to remain with us throughout the proceedings. Ladies and gentlemen, I have the great pleasure of presenting to you Governor Guild, of Massachusetts. (Applause.)

Address of Welcome by Governor Guild.

Mr. President, Ladies and Gentlemen:—Not even the official duties of the chief executive can ever bar Massachusetts from the duty of hospitality to friends gathered within her borders. (Applause.)

I come in the name of the commonwealth to bid you a most hearty welcome in this, the fairest month of all the year, to extend to you all the privileges that the commonwealth may extend to make your visit within our borders delightful and instructive.

The history of Massachusetts in medicine is too well known for me to rehearse it here. A more formal address of welcome will be delivered to you by my eloquent friend and associate in public office, Mayor Fitzgerald, of Boston. (Applause.) But while he will doubtless invite you to visit the local institutions, for which the city of Boston deserves just credit, I trust that your investigations will not be confined to the limits of this city. The commonwealth of Massachusetts has something to show you which we hope may prove of interest. I trust, for instance, that you will acquaint yourselves with the free distribution of antitoxin for the cure of diphtheria among the children of this commonwealth, carried on under the auspices of the commonwealth itself. (Applause.) I trust you will acquaint yourselves with that particular care for the unfortunate in which Massachusetts has been a leader, not only in the United States, we think, but of the entire world, the changing of poor, little, helpless, feeble-minded children into at least more useful members of society, and that has made the name of Dr. Fernald known throughout the civilized world. (Applause.) We trust you will visit the state institutions for the insane, and the schools where the blind and the deaf and dumb are taught to do their share in the duties of the world.

The colors which decorate this hall remind me that the service of medicine is not only of value in time of peace, but also in time of war. The physician in America is not even a physician merely; he has also been a citizen. The history of Massachusetts as a free commonwealth, like the history of the United States, began with the sacrifice of an American physician, a Massachusetts physician, at the battle of Bunker Hill. It was Dr. Warren, who phrased the immortal words, "How sweet and glorious a thing it is to die for one's country!" So we find a soldier who went into Cuba and led a victorious charge in which there was the necessary taking of life, who devoted himself to restoring law and order, and in stamping out disease, who devoted himself to the preservation of human life. I refer to Leonard Wood, the physician, of Massachusetts. (Applause.)

That brings me to just one other thought, and that is, proud as we are of Massachusetts, we acknowledge a broader brotherhood. Those of us who have served in time of war know when we touch elbows what it is when the surgeon waiting on you is from Columbia University, and the nurse has come from South Dakota, while you yourselves are from Massachusetts. We appreciate the fact that the boundaries of our states are becoming less and less as the years go on, and that proud as we may be in coming from Iowa, Kentucky, Minnesota, California, or from Massachusetts, we are proudest of all to find that the type of American is becoming one and the same all over the United States, and that we are brothers indeed, whether disaster comes as it has to San Francisco, or Galveston, or on the Eastern coast of the United States of America. (Applause.)

So, again, I bid you a hearty welcome. An American physician, from New York, has just published a most interesting volume on the "True Triumph of Japan." In this little book he speaks of the wonderful sanitary precautions taken in connection with the Japanese camps, and the care of the army. The history is wonderful. It reflects great credit on that grand empire of the Western ocean. But, perhaps, there is another war of which something might be said. Wars have been in many ways a curse to the world. Suffering and torment and trial are unavoidable. But, doubtless, there was a war in which our country was recently engaged, a war in which physicians especially were prominent, which stands unique according to the records of warfare among the nations. The number of lives saved by sanitation in one city in one year, the city of Havana, was more than the number of lives lost on both sides during the entire war, thanks to the skill and efficiency of the surgeons of the United States. (Applause.)

THE PRESIDENT:—This Association is composed of representatives from every state and territory of the Union. We have present this morning a distinguished citizen of Massachusetts, whose name is familiar in every state and territory of this Union, and I am sure I will be presenting no stranger, even to this audience, gathered from every part of our great country, when I present to you President Eliot, of Harvard University. (Applause.)

Address of Welcome by President Eliot, of Harvard.

I welcome you to an exceptional community in which physicians and surgeons have for generations held equal rank with the members of all other learned and scientific professions. Massachusetts has long recognized in physicians and surgeons as a class powerful contributions to the public health and happiness, to the advancement of medical knowledge, to the industrial and economic interests of the community and its moral welfare. For generations this fortunate community has enjoyed the privilege of knowing intimately physicians who illustrated the highest qualities of human nature—men courageous and resolute under responsibility; imperturbable in the presence of danger, conservative, yet bold; in professional relations patient, cheerful and tender; diligent learners throughout life, and diligent teachers of sound doctrine concerning health and disease, virtue and vice. Experience of these noble qualities in the best physicians and surgeons during the past two hundred years has led Massachusetts to recognize completely the dignity and serviceableness of the profession of medicine and to treat it, therefore, with the highest official and social consideration. This is more than can be said with accuracy concerning the standing of the physician in many older and more conspicuous communities. (Applause.)

I welcome you as promoters of public health and efficiency to a community which, under the guidance of physicians has effectively protected its water supplies, regulated the production and sale of milk, food and drugs, controlled the smallpox, typhoid fever at the public expense, established humane treatment for the insane and defective, and supported admirable hospitals for the sick and injured, partly by the endowment method and partly at the public charge. All these beneficent

things it has done under the guidance and at the instigation of wise physicians, and accordingly this community pays to your profession the homage of its admiration and its gratitude. (Applause.)

I welcome you as members of a profession which relies for success and progress on careful observation, limited inference and exact recording—three scientific methods which are of universal application and utmost promise in human affairs. I welcome you as men who must have all their knowledge and skill available on the instant and at their fingers' ends. That is the best kind of knowledge and skill. I welcome you as men who do things rather than talk about doing them, or about what other people have done. I welcome you as men, who knowing human nature immediately, have good hope of serving and improving it. I welcome you as habitual bringers of comfort and help, both physical and moral, to men and women in personal peril or distress, and as prophets and missionaries who warn and defend the people against the most frightful perils of earlier times—against such pests as smallpox, cholera, yellow fever, tuberculosis and the bubonic plague, thus not only saving human life, but making the life of all mankind brighter and happier.

I welcome you to this historic town and commonwealth which have always stood for freedom of thought and speech, public order, universal education, reverence towards the past and hopefulness towards the future. May you enjoy to the full their beautiful June scenery, their associations with American history and literature, their many institutions of intelligent beneficence, and the cordial hospitality with which their citizens will try to convince you of their respect and good will toward the medical profession. (Applause.)

THE PRESIDENT:—We have another distinguished citizen of Massachusetts who is thoroughly at home in this audience. I present to you Dr. Arthur T. Cabot, president of the Massachusetts State Medical Society, who will deliver to you an address of welcome. (Applause.)

Address of Welcome by Dr. Cabot.

Mr. President, Ladies and Gentlemen:—I have the honor and the pleasure of representing the Massachusetts Medical Society and of bringing you a cordial greeting and hearty welcome from the profession of New England. We welcome also the distinguished guests that are drawn within our gates. I cannot call them strangers, for names like those of Widal and Trendelenburg are as familiar to American ears as those of our own masters in medicine. (Applause.) We feel honored that you have brought this great meeting to Massachusetts, and we will do what we can to help you to make it great in results as well as in numbers. We appreciate the effective work of this national association for the improvement of American medicine. There never was a time when the world had such faith in the possibilities of medicine as now. Medical research has made our knowledge exact and sure to a degree never before dreamed of. Knowledge brings power. It also brings responsibility. The practicing physician is to-day accountable and must see to it that our constantly increasing knowledge of disease is utilized to the utmost in the protection of the public health. It is only by the cordial co-operation of medical men throughout the whole country that the great tasks before us can be creditably achieved. We of Massachusetts gladly accept responsibility for our share in this united endeavor. The importance of co-ordinative action in obtaining the best results in public medicine is so evident that it may interest you if I should describe the effort now being made here in Massachusetts to concentrate the medical power of the state in the solution of one burning problem, that of how to control tuberculosis.

In order to cope satisfactorily with this disease, in order to insure that each patient is so cared for that he or she ceases to be a menace to family and friends, ceases to spread contagion, it is necessary to enlist the active interest of every physician in the state. Realizing this and aiming at an organization which shall reach into every town and village, shall be long-enduring, and shall not depend on the enthusiasm of a few for its future activity, the district societies have each and all appointed committees to study the problem as it is presented in their own localities and to formulate plans for efficient work. These committees, by their reports, keep the interest active in the district societies; they are of great assistance to the boards of health by securing for them the intelligent support of the profession, and the acquiescence of the community in restricting rules and orders. They are taking an active part in forming anti-tuberculosis societies among the laity; they are, in short, forwarding and guiding the movement against the great white plague, a movement which is becoming so wide-spread and so earnest that it has rightfully been named a crusade. Once or twice a year district committees meet together to report progress, to compare results and to discuss methods. In this way we hope to bring about a concerted and sustained plan of action and to constantly stimulate the interest and enthusiasm of practitioners throughout the commonwealth. Each physician must, as far as possible, see to it that no patient of his transmits the disease to any other person. When this responsibility is once widely felt, the fight against tuberculosis will be half won. Such a campaign, successfully carried forward, will do much to consolidate the profession and teach us to pull together, bring out our strength, and give us confidence in attempting the solution of other medical problems.

May not some similar plan be applied to the whole country under the auspices of this great association? And I hope and believe it may. This is but one corner in the field of work stretching before us, in which we can all labor, with constant opportunity, for mutual help. This meeting will make, I am sure, a decided step forward in medical efficiency and progress. We shall all carry away with us fresh inspiration and shall go back to our work better equipped and stimulated by this contact with others who have like ideals.

That your stay in Boston may be pleasant as well as profitable is our wish and endeavor. (Applause.)

THE PRESIDENT:—The Association is especially honored on this occasion by the delivery of the addresses to which we have listened—addresses expressive of the cordiality of the welcome which has been extended to us in this great city. But we have an additional address, and I have the pleasure as well as honor of presenting to you Mayor Fitzgerald, of the city of Boston. (Applause.)

Address of Welcome by Mayor Fitzgerald.

Gentlemen:—Once more, after an interval of forty-one years, your Association holds its convention in Boston, and I, as mayor, am privileged to throw open to you the gates of our official hospitality. It is, indeed, a rare privilege to greet the distinguished representatives of a profession which renders such universal service and has personal claims upon the good will of almost every man. Dealing with life itself and the mysteries of birth and death which envelop it, you develop in your calling the finest virtues of our nature. When we read of young physicians in Cuba and New Orleans giving up their lives in experiments designed to trace the source of infection in yellow fever, and when we remember that such instances of heroic sacrifice are the commonplace of medical history, we understand why the title of doctor should be everywhere one of dignity and affection.

You come from many states and foreign countries, single-minded in your devotion to one great central idea. I trust that, during your stay in Boston, you will observe that the government of this city is not uninfluenced by the same idea, but feels its due share of responsibility for the health of the people. We provide sanitary living conditions, a pure water supply, inspection of milk and vinegar, registration and quarantine of all contagious and infectious diseases, hygienic instruction in the public schools, and public parks, gymnasia, playgrounds and baths. Any inspection of our methods in the field of hygiene which should ignore the last named agencies would be sadly incomplete, for as you all know, prevention in this matter is a thousand times better than cure. (Applause.)

Yet prevention is not always possible, in spite of all our pains. There has always been practice enough for physicians and surgeons in Boston, and I believe we have had our share of the great names of your profession. One chair alone, the Parkman professorship of anatomy at Harvard, has had four such distinguished occupants as John Warren, J. Collins Warren, Oliver Wendell Holmes and Thomas Dwight, my associate in this reception and an honored member of the Board of Library Trustees. Indeed, the faculty of the Harvard Medical School has never been without names of national and international eminence; and the ether monument on the Public Garden, erected in honor of Dr. W. T. G. Morton, of Boston, certainly commemorates one of the greatest discoveries ever made in the history of medicine. (Applause.)

Most of you, I presume, will visit our various medical colleges while you are here, and some of our well equipped hospitals, from the Massachusetts General Hospital, the oldest of all, to the City Hospital, of which Boston is no less proud than of its public library, its schools, its park system and its water works. The land and buildings of this institution represent an investment of over $3,000,000, and its various departments contain nearly a thousand beds. Its administration, which is in the hands of a board of trustees, who give their time and services without pay, is of the highest order; while the progressive spirit of its medical staff may be judged from the fact that the

Boston City Hospital was among the first to introduce pathological study in clinical work and to use antitoxins for diphtheria and the x-ray in diagnosis. (Applause.)

Other hospitals may be mentioned as deserving credit for success in special fields—such as the Carney Hospital, which for a long time was alone in receiving consumptive patients, and the Children's Hospital, which has done such noble work in correcting deformities and in preserving precious young lives. But there is one hospital still to arise and one monument not yet erected. The people of Boston have in tuberculosis a foe as insidious and implacable as the typhoid fever which scourges Philadelphia and Pittsburg. We have recently organized our defensive forces and laid the foundation of what I prophesy will be a great institution; and I here and now promise a monument, built by popular subscription, on any site he may select, to the member of your profession who shall forge the weapon by which we may effectively check the ravages of the great white plague. (Loud applause.)

Long addresses are not to your taste, gentlemen. Let me, then, briefly, but heartily, bid you welcome to Boston. I trust that your deliberations may be fruitful in good results for suffering humanity, and that you may succeed in your efforts to raise the standard of membership in your honorable profession. (Applause.)

THE PRESIDENT:—We will have the pleasure of having another address from another distinguished citizen of Boston, a member of our profession, and while we know that his name is familiar here in Boston, it is likewise familiar in medical circles throughout this entire country. I am sure that you will all be pleased to hear a word or two from our distinguished brother of this city, Dr. Herbert L. Burrell, Chairman of the Committee of Arrangements. (Applause.)

Address of Chairman of Committee of Arrangements.

Mr. President and Members of the American Medical Association:—The President has been good enough to speak of me individually; but what I am here for is to report as the Chairman of the Committee of Arrangements.

In behalf of the Committee of Arrangements, after I was appointed by the President, I was fortunate enough in securing the co-operation of gentlemen in medicine and the allied sciences to serve as associates on this committee. There have been associated with me more than seven hundred physicians, who have worked to arrange the necessary details for the conduct of the session, and to extend to you a cordial welcome. In fact, including the medical profession and the laity, there are actively engaged in the arrangements of this session between twelve hundred and fourteen hundred men and women in New England. Not the least are we indebted as a Committee of Arrangements to the wives of physicians, to representative women, and to the young ladies of Boston, who have generously contributed their services in arranging for your entertainment. The necessary funds for this session have been generously contributed by the medical profession. We have also received financial aid from public-spirited citizens. Harvard University and the Massachusetts Medical Society have cordially assisted in the preparation for the session. The commonwealth and the municipality, through their representatives, have already extended a welcome to you. We are deeply indebted to Tufts Medical College, to the Massachusetts Institute of Technology, and to many private societies and associations in this city who have generously placed their facilities at the disposal of the Committee of Arrangements. While the labor of preparation has been considerable, the burden has been lightened by the practically uniform co-operation of the medical profession and the public, who have striven to make the arrangements worthy of this great national association at its session in Boston. To me, personally, the arrangements have been a pleasure, owing to the helping hands that have been so generously extended. The Committee of Arrangements trusts, Mr. President, that the sole discharge of its duty will be to the advancement of knowledge in medicine. (Applause.)

THE PRESIDENT:—The ceremony attendant on the installation of the chief executive officer of this Association has always been an exceedingly simple one. On this occasion my duties in this respect are exceedingly simple and easy, because our President-elect is one whose name is so familiar in every part of this great country where scientific medicine is cultivated, that he is well and familiarly known. I have the exceptional pleasure in presenting to you your President-elect this morning, a gentleman of national and international reputation, a reputation won simply and alone by individual merit, without the aid of great institutional environment; a gentleman comparatively young for the position to which he has attained, and whose claim on the recognition of the medical profession of America represented in the American Medical Association is that of high scientific achievements, to which there is joined a superb and pure professional character. (Applause.) Ladies and gentlemen, it is my privilege and honor to present to you the President-elect of the American Medical Association, Dr. William J. Mayo, of Minnesota. (Loud applause.)

At the close of Dr. McMurtry's introductory speech, at the request of Dr. Burrell, three lusty cheers were given President Mayo.

President Mayo then delivered his address. This was published in THE JOURNAL, June 9.

Second General Meeting—Tuesday, June 5

The Association met at Jordan Hall at 7:30 p. m.

The Oration in Medicine was delivered by Dr. Frederick C. Shattuck, of Boston.

The Oration in Surgery was delivered by Dr. Joseph D. Bryant, of New York City.

These were published in THE JOURNAL, June 9.

On motion, votes of thanks were extended to these gentlemen for their scholarly and instructive addresses.

Third General Meeting—Wednesday, June 6

The Association met at 7:30 p. m.

Dr. W. H. Sanders, Montgomery, Alabama, delivered the Oration on State Medicine.

On motion, a vote of thanks was extended to Dr. Sanders for his admirable address.

Queries and Minor Notes

LIQUOR CRESOLIS COMPOSITUS.

GALLUP, N. M., May 24, 1906.

To the Editor:—I note that in the special article "The Pharmacopeia and the Physician," in THE JOURNAL, Feb. 24, page 582, under head of disinfectants, you mention liquor cresolis compositus, U. S., a mixture of equal parts of soap and cresol, and state that this preparation is an available substitute for the many expensive proprietary preparations, creolin, cresolyn, lysol, etc. Can you furnish any further information as to the formula, manipulations, etc., for producing this compound? What is the commercial cost of cresol? I have put the question to several pharmacists and none of them seem to be able to master the subject. One of the proprietaries mentioned in connection with liquor cresolis compositus cresolin, it is claimed by the manufacturers, contains 50 per cent of cresylic acid. I have not been able to find cresol on any of the jobbing house drug lists, and if the compound can be made at less expense than the proprietaries cost, I would be glad to have the formula. It seems to me misleading, however, to claim that a compound which admittedly is 50 per cent. diluent should be equally effective in disinfecting power to pure acid carbolic, and why should it be less poisonous except for the dilution?

W. H. BURR, M.D.

ANSWER.—The formula of the Pharmacopeia directs that: 80 gm. (℥viss) potassium hydroxid be dissolved in 50 gm. (℥ss) water contained in a porcelain dish, treated with 350 gm. (℥iiiss) linseed oil and stirred until saponified. To this linseed oil soap the cresol is added and the mixture stirred until a clear solution is obtained. Then sufficient water to produce 1,000 gm. (℥x) is added. This formula has been found satisfactory and produces a preparation which yields an almost clear solution when mixed with water, provided that the official cresol is used. This is offered by the Schoellkoff, Hartford & Co., Mallinckrodt Chemical Works and others at about 40 cents a pound. Chemically, the cresols may be considered as methyl derivatives of phenol, differing from the latter only by the introduction of a methyl group into the benzene nucleus, thus: C_6H_5OH is phenol, while $C_6H_4(CH_3)(OH)$ is methylphenol or cresol. The introduction of this methyl group into phenol increases its antiseptic properties very materially, and, it is generally believed, at the same time decreases its toxicity. Unfortunately, the presence of this methyl group decreases the solubility in water, thus while part of phenol will dissolve in 20 parts of water, part of cresol required 60 parts. Attempts to remedy this insolubility in water have led to the introduction of a host of cresol preparations. Of these the preparations of the type of the compound solution of cresol U. S., in which the cresol is rendered soluble by the presence of soap have been most satisfactory.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

June 2.

1 *Medicine and Law in Relation to the Alcohol, Venereal Diseases, and Tuberculosis Problems. S. A. Knopf, New York.
2 *Need of Publicity in Venereal Prophylaxis. D. Lewis, Chicago.
3 Rare Case of Presumably Congenital Luxation of the Arytenoid Cartilage. P. T. Hald, Copenhagen, Denmark.
4 Clinical Remarks on Traumatism as an Etiologic Factor in Appendicitis. W. J. Macdonald, St. Catharines, Ontario.
5 *Deaths of Athletes and Fatalities in Athletic Games During the Year. R. E. Coughlin, Brooklyn, N. Y.
6 *Treatment of Typhoid Fever. J. R. Landers, Bernadotte, Ill.
7 Summer Diarrhea in Infancy. G. T. Myers, Norfolk, Va.
8 Cerebral Segmentation. W. Wood, New York.
9 *Modification of the Incision for Exposing the Mastoid Bone. L. J. Hammond, Philadelphia.

1. **Medicine and Law in Relation to Alcohol, Venereal Disease and Tuberculosis.**—Knopf attributes the majority of crimes to drunkenness. It is the most frequent cause of social misery, domestic dramas, privation and want. Alcohol often leads to sexual overindulgence and illegitimate relations. Excessive alcoholic indulgence often precedes the contraction of syphilis and gonorrhea. Knopf believes in the enaction of laws so far as is possible, to prevent habitual drunkards from marrying. The laws which have already been made in relation to the suppression of alcoholism should be enforced. The "patent-medicine" curse should be suppressed. He also believes in the Gothenburger system, which consists in the manufacture and sale of alcohol by the government and giving the dispenser of alcohol a salary only; but he fears that this system is not practicable in our country. The common system of "treating" is at the root of much of this evil of alcoholism. Sanatoria for alcoholics are advisable. The author suggests a law making it prohibitive for persons suffering from gonorrhea or syphilis in any of the infectious stages to contract marriage. He also reviews the tuberculosis problem.

2. **Publicity in Venereal Prophylaxis.**—Lewis expresses clearly and emphatically his views regarding methods of instruction concerning venereal prophylaxis. The boy does not know the meaning of the approach of adolescence. He should be told the truth about the sexual instinct and the need of controlling it. His fears should be dispelled and he should be taught the dignity of virility. Principles of honor toward the young girl should be inculcated in him and the danger of venereal disease should be explained to him. Actual knowledge is of even greater importance to the girl. Her reputation for life is blasted by one mistake. The young people throughout this country should be taught hygiene and physiology. They should know about reproduction. False modesty and maudlin sentimentality should be cast aside. It is the duty of every practitioner of medicine to give instruction regarding the venereal plague in its different relationships. The curse of the past has been ignorance.

5. **Fatalities Among Athletes.**—Coughlin presents the following conclusions: Athletes are prone to cardiac lesions, whether a physiologic hypertrophy, a hypertrophy with dilatation and endocarditis, a white spot on the heart, myocarditis, or the different valvular conditions. Pneumonia ranks high as a cause of death in athletes because of the cardiac embarrassment in connection with this disease. Athletes appear to be susceptible to infectious diseases, and when affected with these diseases succumb to them as readily as do others. Pulmonary tuberculosis is a cause of death in a large percentage of athletes. The average age at death of athletes is far below that of the average person in the ordinary walks of life. The game of football as played in America during the season of 1905 was the cause of an appalling number of serious injuries and fatalities, and it is very evident that something will have to be done to eliminate the dangerous features of the game, especially mass play. The idea in all athletics should be to improve and to make men, not to maim, cripple and bury them.

6. **Treatment of Typhoid.**—Landers contends that in typhoid the feces can be relatively disinfected. He prefers the sulphocarbolates as intestinal antiseptics. The sponge or full bath should be used. The diet should be one that can be digested and assimilated. Mild salines will keep the bowel cleared out. Landers has used this method for years and states positively that it will prove absolutely efficient.

9. **Incision for Mastoid Operation.**—Hammond describes this incision as being triangular instead of slightly semicircular as in the usual method. It begins about one-half inch back of the superior post-auricular attachment, extending through all the tissues obliquely backward, then downward along the hairy margin, to a point just below the middle of the posterior border. From this point the incision is again carried through all the soft tissues forward and downward to the posterior border of the diagnostic fossa. This incision avoids all post-auricular vessels and nerves. A roomy field is also furnished. The entire soft tissues overlying the mastoid which are always infected are lifted with their periosteum in one sheet. Drainage from the bony cavity will be perfect. The flap made conforms very closely to the outline of the mastoid bone.

New York Medical Journal.

June 2.

10 *Critical Analysis of 186 Operations on the Liver and Gall Passages, and the After Results. (To be continued). C. A. McWilliams, New York.
11 *Do Central Tracts of the Nervous System Regenerate? L. P. Clark, New York.
12 Acute Abdominal Symptoms from Chronic Conditions. F. D. Donoghue, Boston.
13 Bacteriologic Types of Acute Conjunctivitis. (Continued). A. Duane and T. W. Hastings, New York.
14 Atrophy of the Intrinsic Muscles of the Hands Due to Lead Poisoning. A. Gordon, Philadelphia.
15 Frontal Sinusitis as an Etiologic Factor in Acute Retrobulbar Neuritis. N. M. Black, Milwaukee, Wis.
16 Puerperal Eclampsia. W. H. Randle, Germantown, Philadelphia.
17 Diagnosis of Tabes in the Preataxic Stage. A. D. Young, Oklahoma City.

10. **Operation for the Liver and Gall Passages.**—McWilliams analyzes the results of 186 operations of the liver and gall passages. Of these, 111 were operations for biliary calculi with a mortality of 12 per cent., 99 were primary operations, with 11 deaths, and 12 secondary with 2 deaths. The causes of death were perforation of the duodenum with peritoniitis, 1; cholemia and nephritis, 1; pylephlebitis, 1; peritonitis, 3; postoperative hemorrhage with jaundice, 3; postoperative shock, 1; uremia with suppurative recurrent colitis, 1; pneumonia, 1; unknown, 1. Jaundice was present in 69 per cent. of the cases; of patients with stones in the gall bladder alone, 43 per cent. had icterus, while of patients with calculi in the common duct 92 per cent. had jaundice. In only 4 of the patients was there a history of the passage of stones prior to the operation. Of the 99 primary operations 80 were on women and 19 on men, and the ages of the patients varied from 22 to 73 years. The mortality in cases in which the stone was in the common duct was 29.6, as contrasted with 6.5 per cent. mortality in the cases with calculi in the gall bladder and cystic duct.

This greater mortality in common duct operations is largely due to lack of drainage and has been improved in recent operations. In 69 of the patients surviving the operation the following results were obtained: 65 per cent. were cured of symptoms referable to the calculi; 10 per cent. were improved; 23 per cent. were not improved; 12 per cent. of the total 99 operated on required secondary operations. One per cent. had probable recurrence of calculi; 9 per cent. developed subsequent herniæ; 10 per cent. had calculi overlooked at the first operation. Postoperative lung complications occurred in 4 per cent; left saphenous phlebitis occurred in 1 case. The most common cause for secondary operation was persisting biliary fistulæ due in 2 cases to calculi overlooked in the cystic duct. In 2 cases calculi were overlooked in the gall bladder. In one case a calculus was overlooked in the common duct. In 2 cases the fistulæ were due to probable stricture of the biliary passages without the presence of calculi at the second operation. The lessons to be learned from these secondary operations are: 1. More thorough search for calculi at the primary operation, splitting the ducts wide open if necessary. 2. A primary cholecystectomy would have avoided the necessity for a secondary operation in all but 3 patients. 3. In only

one of these patients had a primary cholecystectomy been performed. This speaks very strongly for the removal of the gall bladder at the first operation, since it seems to give the greatest guarantee against future difficulties, hence greater certainty of cure.

11. **Regeneration of the Central Nervous System.**—In answer to the question, "Do central tracts of the nervous system regenerate"? Clark concludes as follows: Animal experiments fail to provide conclusive data that central tracts of the nervous system ever regenerate so that the former function is restored. In warm-blooded animals, and in the human species in particular, an abortive attempt on the part of the cord to regenerate is largely if not solely confined to fibers of undoubted peripheral type. Histologic analysis of cases of hemisection, compression paraplegia and myelitis, and the like destructive lesions of the cord, fails to show positive evidence that actual structural regeneration of axis cylinders ever occurs in the central nerve tracts of the human spinal cord. In case of complete division of the brain and spinal tracts there is simply degeneration, followed by sclerosis. A most acceptable reason for non-regeneration of such tracts is shown in that the compressed nerve fibers do not possess a neurilemma sheath, from which nerve regeneration mainly if not solely occurs. This lack in cord and brain tracts, in contrast to the regenerating peripheral nerves, is due possibly to a difference of embryologic origin for these two structures of the nervous system. The cases cited by Stewart and Hart for cord regeneration either do not fulfill the conditions of test, being merely hemisections, or, the evidences for regeneration are not definite or convincing. The two suture cases reported by Stewart and Hart and Fowler are good illustrations of this type. In case of complete transverse division of the cord there is no sufficient justification either from experimental or clinical data to warrant suture of the spinal cord in an attempt to cure the defect. experiments, therefore, show that injury to a single kidney, by calculus, direct trauma or obstruction to one ureter, is a powerful predisposing factor in the evolution of a surgical lesion of that organ.

Boston Medical and Surgical Journal.

May 31.

18 Medical Statistics and the Sanitary Department of the Russian Forces in the Far East. J. V. R. Hoff, U. S. A.
19 Method of Instruction in the Harvard Medical School. F. C. Shattuck, Boston.
20 Stiff and Painful Shoulders. E. A. Codman, Boston.
21 Complications of Acute Pneumonia. H. Jackson, Boston.
22 Injuries of the Cranium. W. L. Estes, South Bethlehem, Pa.

St. Louis Medical Review.

May 26.

Surgery, Gynecology and Obstetrics, Chicago.

May.

23 *Acute Unilateral Septic Infarcts of the Kidney. G. E. Brewer, New York.
24 Diagnostic Significance of Ureteric Meatoscopy in Renal Disease. W. C. Klotz, New York.
25 *Observations on a Form of Death Resulting from Certain Operations on the Duodenum and Jejunum. J. W. D. Maury, New York.
26 One-child Sterility. F. S. Mathews, New York.
27 *Positive-Pressure Method of Artificial Respiration. N. W. Green, New York.
28 Pfannenstiel's Incision in Gynecology. H. C. Taylor, New York.
29 *Magnesium Sulphate in the Production of Anesthesia and in the Treatment of Tetanus. J. A. Blake, New York.
30 Pyelitis in Pregnancy and the Puerperium. E. B. Cragin, New York.
31 *Treatment of Inguinal Hernia, with Special Reference to the Use of the Rectus Muscle. J. I. Russell, New York.
32 Some Considerations in the Treatment of Purulent Appendicitis. C. H. Peck, New York.
33 *What Becomes of Lembert Stitches Placed in the Gut? C. Eggers, and J. W. D. Maury, New York.
34 Treatment of Femoral Hernia. J. A. Blake, New York.
35 Technic at the Sloane Maternity Hospital. E. B. Cragin, New York.
36 Splint for the Treatment of Colles' Fracture. E. H. Pool and A. V. S. Lambert, New York.
37 Technic of Operations on the Biliary Passages. A. W. M. Robson, London, England.

23. **Unilateral Septic Infarcts of Kidney.**—Brewer records the history of 13 cases in which a unilateral septic infection of the kidney occurred under the form of a general septic disease in which the general symptoms overshadowed the local disease of the kidney. The lesion as shown by nephrectomy or by autopsy was in most cases unilateral and consisted of multiple septic infarcts. Eleven of the 13 patients were women; in 11 the right kidney was the one involved. A sudden rise of temperature to 104 F. was the mode of onset, chill occurring in 4 cases. Pain was felt in all but one case. Muscular rigidity was marked in 3 cases. Leucocytosis varied from 12,000 to 35,000. In 12 cases the urine contained albumin, in 5 albumin and pus, and in 5 more albumin, pus and blood. Two patients gave history of previous injury and one previous disease of the kidney, but probably evidence of previous lesion could have been obtained in more cases if it had been thoroughly sought for. In 6 cases in which nephrotomy was performed 5 patients died; in 7 cases nephrectomy was done and 6 patients recovered. Culture from some of the cases showed the presence of *Streptococcus pyogenes*, *Staphylococcus pyogenes aureus*, and the colon bacillus.

Brewer gives the results of experiments to determine why one kidney only is affected in these cases, although the pathogenic organism reaches the organ through the blood stream, and arrives at the following conclusions: None of the control animals which had received a moderate dose of pathogenic bacteria directly into the circulation without previous injury developed a surgical lesion of the kidney. Of 16 animals which in addition to inoculation received an injury to one kidney, 5 showed no lesion or only hyperemia and parenchymatous degeneration. Of the remaining 11 all developed distinct surgical lesions of the kidney, unilateral in the injured kidney in 8 cases. The renal lesions in these cases were practically identical with those observed in the clinical cases. The

25. **Death from Duodenal Obstruction.**—Maury has determined by experiment that if the stomach is excluded for seventy-two hours from communication with the lower gut the animal dies. The line at which an obstruction may occur without fatal effects, which he has called the lethal line, is situated 35 cm. from the pylorus. The cause of death is uncertain, but the author hopes to determine by subsequent investigation whether it is due to an intoxication resulting from a disturbance of the balance of secretion or to some interference with the cerebral circulation brought about by nervous impulses the result of the operation.

27. **Artificial Respiration.**—Green discusses the question as to the advantages and disadvantages of the method of positive and negative pressure in inducing artificial respiration, and what is the best method of applying positive pressure by intubation or tracheotomy. The objection that sudden introduction of air under pressure may lacerate diseased or collapsed alveoli is obviated by introducing a valve into the pressure apparatus which will secure the gradual increase of pressure. He has performed a large number of experiments on animals and sums up his results in the following statements: In dogs the positive pressure method of artificial respiration is efficient; severe operations may be performed with recovery; intubation is an easy and practical means by which to apply the positive pressure; the chief danger after the operation is completed lies in the accumulation, without proper drainage, of septic fluid within the chest.

The result of Sauerbruch's operation on the human being in thoracic conditions are by no means discouraging. It seems reasonable that with either method here discussed the field for thoracic surgery will develop in the direction of active intervention, rather than continue along the present lines of expectant treatment.

29. **Magnesium Sulphate Anesthesia.**—Blake summarizes the results obtained by Meltzer, Meyer, Haubold and himself in the induction of anesthesia by intraspinal injections of magnesium sulphate. It has been shown by animal experiment that the injection of magnesium sulphate intraspinally in the proportion of 0.06 gm. per kilo. body weight will produce a complete paralysis, both motor and sensory, extending upward to involve the whole muscular system and the sensorium. Larger doses produce death by paralysis of the respiration. Blake's report covers 14 cases. In some chloroform was used as an adjunct. No accurate estimate of the time required to produce general anesthesia can be given, but it varied from one to three hours. Analgesia appeared first, the local anesthesia

followed by general, which merged into coma lasting from two to ten hours or more. In some cases operations were done in the period of local anesthesia, unconsciousness not occurring. In 2 cases no anesthetic effect was noted; both patients were alcoholics. The reflexes were at first diminished, then abolished and then returned slowly. Retention of urine was present in all but 2 cases. The rate of respiration was slowed. This rate should be carefully observed, as it is an index of the danger line. Profuse diaphoresis was noted in a number of cases, and the bodily temperature was lowered in some cases. The heart's action was regular and moderate, and the blood pressure was not lowered. Vomiting occurred in cases in which the injection had marked effect. The action of the drug could be checked by removing cerebrospinal fluid and washing with normal salt solution. Magnesium sulphate has been tried in shock in strychnin poisoning, and for local anesthesia by external application, but its action has been disappointing. Blake reports 2 cases of tetanus treated with intraspinal injections of this drug, one patient recovering, the other not. He claims that it restrains the convulsions, relaxes the muscles of mastication, and produces a prolonged effect without injurious action except inhibition of the bladder entailing the need of catheterization.

31. **New Technic of Hernia Operation.**—Russell describes the improvement devised by J. A. Blake in 1900 by which the rectus muscle is made to cover the hernial opening. After the usual preliminary steps of the operation the internal oblique is retracted, the rectus is exposed and the cord being lifted from its bed, the muscle is sutured with two or three interrupted sutures of chromic gut, or, preferably, kangaroo tendon, to the reflected edge of Poupart's ligament. The cord is transplanted as in the Bassini operation, and the internal oblique is sutured to Poupart's ligament in front of the rectus. The external oblique is then sutured over the cord, folding it on itself, thus taking up the slack which had been produced in it by the hernial tumor. Excellent results have been obtained in 36 cases in which the author has used the method.

33. **Lembert Sutures.**—Eggers and Maury from a study of specimens from experimental gastroenterostomies conclude that one of three fates may occur to a Lembert suture: It may remain *in situ;* it may be partially intruded into the lumen of the gut; it may be entirely intruded and disappear in the intestinal contents. The cases which show intrusion are from animals which had a relative short postoperative life—less than a month. It is probable that the intrusion can be accounted for by the fact that the stitch was accidentally carried too deep and actually pierced the mucosa.

Ophthalmic Record, Chicago.

May.

38 Foreign Body in the Orbit. C. H. Baker, Bay City, Mich.
39 *Morax-Axenfeld Conjunctivitis. F. T. Tooke, Montreal.
40 Successful Operation for Conical Cornea. F. Stauffer, Salt Lake City, Utah.
41 New Foreign-Body Instruments. F. C. Todd, Minneapolis.
42 *Transillumination of the Eye in the Differential Diagnosis of Intraocular Tumors, with Description of an Ocular Transilluminator. H. V. Würdemann, Milwaukee.
43 Recent Improvements in Perimetry. F. A. Davis, Denver.
44 Choked Disk and Brain Tumor. A. R. Baker, Cleveland.

39. **Morax-Axenfeld Conjunctivitis.**—Tooke says that the symptoms complained of are those of a burning sensation in the eyes, generally worse in the morning. There is usually a discharge and the lids are found tightly gummed together on waking. Both eyes are usually affected. The conjunctiva is slightly hyperemic and somewhat thickened near the ciliary margin, assuming a velvety appearance. The secretion expelled by contraction of the lid is seen on the lid margin as brownish-yellow crusts and the skin at the palpebral margin is erythematous and excoriated. The cornea is seldom affected, and ulcers, when they occur, are generally benign and shallow and do not spread. There are, however, severe cases accompanied by hypopyon and iritis. There is difference of opinion as to whether the diplobacillus is present in the nose. The disease may be spread through the air, and Axenfeld has devised a mouth veil to prevent bacteria being carried to the patient from the operator in the act of speaking. The same device has been adopted in the Boston Eye and Ear Infirmary. Sulphate of zinc in 0.5 per cent. to 1 per cent. solution acts as a specific, and when employed systematically will invariably cure the disease. Many observers, however, claim that this strength of solution is too strong and that equally good results are obtained by use of a 0.25 per cent. solution.

42. **Transillumination of the Eye.**—Würdemann has devised a modification of the De Zeng ophthalmoscope. The entire instrument is not much larger than a fountain pen and may be handled in the same manner. The small electric globe in the ophthalmoscope is replaced by another of the same size, on the end of which there is a lens. The cone-shaped screw cap of the instrument contains a glass rod about three-fourths of an inch in length, which comes in contact with the end of the lens. Nearly all the light is thus focused in the glass rod and is brought out through it to the tip of the instrument, and from there a beam of light is projected through the eye or the structures to be illuminated. The instrument is also efficient for illuminating the frontal and ethmoidal sinuses, the bridge of the nose and the maxillary sinuses.

New Orleans Medical and Surgical Journal.

June.

45 Two Yellow Fever Topics. S. E. Chaille, New Orleans.
46 Pathology. C. W. Helitzman, Muskogee, I. T.
47 *Early Diagnosis of Malignant Tumors, with Special Reference to Cancers of Breast, Uterus and Stomach. A. A. Landry, Palncourtville.
48 Altruism Has Limitations, and Charity Begins at Home. B. A. Colomb, Union P. O., La.
49 Tinea Favus Papillaris. J. V. Shoemaker, Philadelphia.

47. **Early Diagnosis of Malignant Tumors.**—Landry gives the following characteristics suggestive of early malignancy of tumors of the breast, uterus and stomach: 1. Rapid growth. 2. Tendency of the tumor to invade surrounding tissues. 3. Pain, spontaneous, and of a lancinating and paroxysmal character, was long considered characteristic of malignancy, but is misleading. Pain is not characteristic of early cancer. 4. Too much importance should not be given to retraction of the nipple in cancer of the breast. Redness, edema, nodular development, ulceration, involvement of lymphatic glands and the development of the characteristic cachexia are late symptoms which should not be waited for before having recourse to radical treatment. Early examination in suspected cancer of the uterus and an early resort to exploratory operation in suspected cancer of the stomach are to be recommended.

Buffalo Medical Journal.

June.

50 *Report of 25 Cases of Pneumonia Treated with Pane's Antipneumonic Serum. G. Tartaro, Buffalo, N. Y.
51 *A Series of Tracheotomies. G. F. Cott, Buffalo, N. Y.

50. **Serum Treatment of Pneumonia.**—Tartaro treated 25 cases of pneumonia with Pane's antipneumonic serum with two deaths. He concludes that the serum does not produce any change in the physical signs, but mitigates the gravity of the disease, though, as a rule, it does not shorten the course except in children. The serum produces a drop of temperature of from 1 to 3 degrees. The earlier the injection the more marked, as a rule, is the decrease in temperature. Serum causes relief of the subjective symptoms in nearly every case. Its influence in causing disappearance of cyanosis is very marked. Cardiac and other complications in pneumonia due to pneumonic toxins are relieved by the serum. The principal objections to Pane's serum are: 1. It does not cut short the disease as antitoxin often does in diphtheria. This is explained by the fact that diphtheria is a toxemia and pneumonia a bacteriemia. 2. Pane's serum does not seem to have any power on the local manifestations of the disease. 3. The result of serum therapy is uncertain. This is probably due to the different pathogenic agents which produce pneumonia and the unicism of cultures employed in the production of serum and the different stages of the disease in which it is used. Tartaro believes that we can not dispense with serum therapy of pneumonia, however incomplete its activity.

51. **Series of Tracheotomies.**—In the course of 100 cases presenting indications for intubation in Cott's experience, tracheotomy became necessary in 26, so that he advises the surgeon to carry instruments and tubes for tracheotomy with his regular outfit for intubation. In the circumstances in

which it is usually performed the operation presents considerable difficulties, especially in children with fat necks, and when the light is bad and assistants lacking or inexperienced. The operator must depend mostly on his ingenuity in bringing the work to a successful issue.

St. Paul Medical Journal.

June.

52 Anatomy and Physiology of the Stomach. A. R. Colvin, St. Paul.
53 Etiology and Pathology of Gastric Ulcer. J. L. Rothrock, St. Paul.
54 Diagnosis of Gastric Ulcer. C. L. Greene, St. Paul.
55 *Surgical Treatment of Gastric Ulcer. A. Schwyzer, St. Paul.
56 Medical Treatment of Gastric Ulcer. W. Davis, St. Paul.
57 Etiology of Acute Articular Rheumatism. E. W. Buckley, St. Paul.
58 Joint Lesions Simulating Rheumatism and the Mechanical Treatment of the Same. A. J. Gillette, St. Paul.
59 The So-called Rheumatic Element in Nervous Disease. C. E. Riggs, St. Paul.
60 *Rheumatoid Arthritis. E. L. Kannary, St. Paul.
61 Treatment of Rheumatism. L. C. Bacon, St. Paul.

55. **Surgical Treatment of Gastric Ulcer.**—Schwyzer recommends surgical treatment when internal treatment does not give satisfactory results. The main conditions are partly acute by perforation and hemorrhages partly subacute by gradual perforation into neighboring structures and small repeated hemorrhages and, finally, in the chronic form, long lasting moderate inflammatory and adhesive processes with pain and changes in the function of the organ, indigestion and retention of food. Gastroenterostomy is the usual operation for the relief of stenosis of the pylorus, but in cases in which the ulcer has cicatrized, pyloroplasty gives very good results. **If malignancy is suspected pylorectomy is the operation of choice.** In some cases, with indistinct symptoms of ulcer, very slight changes are found at operation, and yet the operation is successful in removing the symptoms which were probably due to the presence of adhesions. Gastroenterostomy with gastrostomy as performed in the Rutkowsky-Witzel operation is to be recommended for recurrent hemorrhage. This secures rest for the ulcer and is preferable to rectal feeding, which can not be continued for a long time. In profuse hemorrhage of sudden onset when recurring during the strict Leube treatment, the author would not delay operative interference, but would content himself with a jejunostomy if the ulcer could not be very easily excised. Schwyzer reports 20 cases, with recovery from the operation in all.

60. **Rheumatoid Arthritis.**—Kannary favors the infective theory of the etiology of rheumatoid arthritis and calls attention to the fact that it is very important to make a correct diagnosis of the acute forms from ordinary acute rheumatism. The temperature in rheumatoid arthritis is not so high as in acute rheumatism, the joints are swollen but not red. The swelling is fusiform and mostly in the periarticular structures. The pain is much less severe. There is no tendency to endocarditis. Salicylates have no influence and the disease progresses steadily to the chronic condition.

The Alienist and Neurologist, St. Louis, Mo.

May.

62 Mixoscopic Adolescent Survivals in Art, Literature and Pseudo-Ethics. (To be continued.) J. G. Kiernan, Chicago.
63 Erotic Symbolism. (To be continued). H. Ellis, Cornwall, England.
64 Psychoencephalonasthenia or Cerebrasthenia Simplex and Psychoencephalonasthenia or Cerebrasthenia Insanlens. (To be continued). C. H. Hughes, St. Louis, Mo.
65 Legal Aspects of Epilepsy. H. C. B. Alexander, Chicago.
66 *Railway Brain Strain of, and Brain Strain Regulation of Railway Employés. C. H. Hughes, St. Louis.

66. **Railway Brain Strain.**—Hughes states that railway travel will not be freed from its present appalling peril till the exacting and exacted brain strain on its employés is lessened and the employés themselves take better care of their brains by the avoidance of all those influences when off duty that tend to vitiate the integrity of the mental powers, and by not seeking to do excessive overtime work. No railway is safe from the posibility, almost certainty, of accident when train dispatchers, engineers or switchmen serve continuously from forty-eight to seventy-two hours, or even for twenty-four hours, and it is the humane duty of the medical profession, with the present psychologic light on the ordinary brain's endurance capacity, to advise and to insist that such excessive brain strain in all departments of public service cease, especially when consequences are so serious as in the railway service.

American Journal of Orthopedic Surgery, Philadelphia.

April.

67 Rigid Spine. G. R. Elliott, New York.
68 *Mechanical Treatment of Non-tubercular Joint Inflammation. R. H. Sayre, New York.
69 Calf Deformity in Club-foot Cases. E. W. Ryerson, Chicago.
70 Early Operative Treatment of Tuberculous Osteitis of the Knee. B. Bartow, Buffalo, N. Y.
71 Modification of the Back Brace for Pott's Disease. A. Thorndike, Boston.
72 Modification of the Dollinger Brace for Cervical and Upper Dorsal Pott's Disease. R. Taylor, Baltimore.
73 *An Apparatus for Making Passive Motion of the Elbow. G. G. Davis, Philadelphia.
74 Treatment of Knee Ankylosis with a Shaffer Semilunar Cartilage Brace Modified by a Stromeyer Screw and a Congdon Catch. J. M. Spellissy, Philadelphia.
75 Cubitus Varus, Showing Deformity of Lateral Curvature of the Spine. Corrected by Osteotomy. F. E. Peckham, Providence, R. I.
76 Treatment of Paralytic Club Foot by Arthrodesis. W. R. Townsend, New York.
77 Observations on Broken Necks. R. H. Sayre, New York.

68. **Non-tubercular Joint Inflammation.**—Sayre urges the importance of rest and quiet in the early stages of arthritis deformans and tuberculous joint affections in giving freedom from pain, shortening the time of treatment, and lessening the amount of destruction in the joint. Instrumental protection is not to be employed to the exclusion of the many details of diet and hygiene so essential in the treatment of these cases, but simply added to them as a most helpful assistant.

73. **Passive Motion of Elbow.**—In several cases of excision of the elbow Davis succeeded in hastening restoration of motion by the use of the following apparatus: A leather sleeve was made, extending from the wrist to the elbow and laced up in front. To the under side was riveted a flat bar which extended six or eight inches (15 to 20 cm.) beyond the elbow and bent at a slightly obtuse angle. To this bar was fastened a weight of about one pound. It could be moved along the bar and fixed in any desired position by a screw. As the patient moves around the arm is continually jogging up and down in pendulum fashion. The weight on the lever should be so adjusted as to counterbalance the weight of the arm and hand. If the apparatus becomes irksome it can be left off for several hours and its use again resumed.

The Postgraduate, New York.

May.

78 Case of Raynaud's Disease. R. Abrahams, New York.
79 Case of Pyemia. G. H. Cocks, New York.
80 Case of Malignant Endocarditis. G. H. Cocks, New York.
81 Scope of Local Anesthesia in General Surgery. J. A. Bodine, New York.
82 Cholelithiasis and Its Treatment from the Practitioner's Standpoint. L. Weber, New York.
83 *Dermo Scale for the More Accurate Description of Skin Lesions. C. W. Allen, New York.
84 Case of Double Optic Neuritis Which Illustrated the Sometime Value of Agnosticism in Medicine. D. B. St. John Roosa, New York.

83. **Dermo Scale.**—The scheme proposed by Allen is based on the metric system, the unit of the dermo scale being one-quarter of a millimeter. In order to designate a given lesion by the proper scale number it is necessary only to know its diameter in mm. or cm., multiplying the mm. by 4 and the cm. by 40; thus a lesion having a diameter of 5 mm. would number 20 of the scale, or the size of the French pea. Number 40 would correspond to 10 mm. diameters, or dividing it by 40 would give 1 cm. Number 100, corresponding to lesions the size of a shilling, quarter-dollar, sou, krone, etc., would be known at once to be of 2½ cm. diameter, while number 400, whose exact diameter is 100 mm. or 10 cm., corresponds to palm-sized lesions or tumors of adult fist-size. Allen says that if these few points be borne in mind and the scale numbers 1, 40 and 400 be remembered, it becomes an easy matter to think of all the sizes now designated by seeds and small objects as numbering from 1 to 40, and those designated by coins from 40 to 100, while beyond this the larger fruits, vegetables and anatomic parts of the body which have usually been brought into service would correspond to multiples of 100 indefinitely.

Physician and Surgeon, Detroit and Ann Arbor.

April.

85 Pathologic Physiology of the Tractus Genitalis. B. Robinson, Chicago.
86 Some Medical Mistakes. M. F. Porter, Ft. Wayne, Ind.
87 Tonsillitis and Its Complications. C. F. Kuhn, Detroit.

Journal of Nervous and Mental Disease, New York.

May.

88 Contribution to the Study of Cerebellar Tumors and Their Treatment. J. J. Putnam and G. A. Waterman, Boston.
89 Hyperesthesia and Hypalgesia and Their Significance in Functional Nervous Disturbances. E. B. Angell, Rochester, N. Y.
90 Coming of Psychasthenia. G. A. Blumer, Providence, R. I.

Virginia Medical Semi-Monthly, Richmond, Va.

May 25.

91 Production and Therapeutic Value of Roentgen Rays. (To be continued). J. C. McGuire, Washington, D. C.
92 Treatment in Infancy. W. H. Birchmore, Brooklyn, N. Y.
93 Alkaloids in Practice. M. G. Price, Mosheim, Tenn.
94 Acute Nephritis—with Special Reference to Diagnosis and Treatment. O. C. Wright, Jarratt, Va.
95 My Experience with Downes' Electrothermic Angiotribe in Pelvic and Abdominal Surgery. J. W. Bovée, Washington, D. C.
96 Pathology, Diagnosis and Treatment of Diphtheria. P. A. Irving, Richmond.

Medical Fortnightly, St. Louis.

May 10.

97 Lymphoid Hypertrophy in the Pharyngeal Vault. W. W. Bulette, Pueblo, Colo.
98 Pathology and Diagnosis of Lesions of the Spinal Cord and Peripheral Nerves. F. N. Norbury, Jacksonville, Ill.
99 Vaginal Tampon. B. Robinson, Chicago.
100 Relation of Man to Nature (A Study Prompted by "Testimonies of the Sepulchres"). A. S. Ashmead, New York.

The Medical Fortnightly, St. Louis.

May 25.

101 The Newer Neurology. L. H. Mettler, Chicago.
102 Treatment of Gallstones with Cholagen. C. D. Aaron, Detroit, Mich.
103 Relation of Man to Nature (A Study Prompted by "Testimonies of the Sepulchres"). A. S. Ashmead, New York.
104 Educational Influence and Significance of Sanatoriums for Cases of Incipient Tuberculosis. G. Homan, St. Louis.

Brooklyn Medical Journal.

May.

105 Honors that Have Come to the Medical Profession in America. W. Schroeder, Brooklyn, N. Y.
106 Are Tuberculosis Clinics Dangerous to the Public Health? J. H. Raymond, Brooklyn.
107 The Long Island Open Air Sanatorium. H. Greeley, New York.
108 Liability of Physicians and Surgeons in Civil Actions for Malpractice. E. L. Prentiss, New York.

Chicago Medical Recorder.

May 15.

109 Indications for Operative Interference in Mastoiditis Associated with Acute Suppurative Otitis Media. T. M. Hardie, Chicago.
110 Tuberculosis as It Affects the Eye. W. H. Wilder, Chicago.
111 Etiology and Symptomatology of Scarlet Fever. J. L. Fleming, Chicago.
112 An Enormous Semi-Submerged Tonsil. E. Pynchon, Chicago.
113 Standard of Government Meat Inspection. W. K. Jaques, Chicago.
114 Treatment of Impotency by Resection of the Vena Dorsalis Penis. G. F. Lydston, Chicago.
115 Cure of So-called Laryngeal Vertigo (Bronchial Syncope). C. J. Whalen, Chicago.

Texas Medical Journal, Austin.

May.

116 Mosquito Extermination and Its Bearing on the Yellow Fever and Modern Quarantines. C. W. Truehart, Galveston City.

Medical Sentinel, Portland, Ore.

May.

117 Surgeon in Relation to the Dentist. J. A. Donovan, Butte, Montana.
118 Rational Treatment of the Communicable Diseases. R. J. Smith, Smithfield, Utah.
119 Nasal Obstruction. J. P. Goray, Portland.
120 Endocarditis as a Result of Gonorrheal Infection. E. R. Northrop, Spokane, Wash.

Colorado Medicine, Denver.

May.

121 Immunity. W. C. Mitchell, Denver.
122 Case of Heart Disease. G. H. Cattermole, Boulder.
123 The Mexican from the Viewpoint of the Medical Practitioner. J. McFadzean, Denver.
124 Avoidable Mortality of Surgery. J. G. Sheldon, Telluride.

Journal of Experimental Medicine, New York.

May 25.

125 Influence of Temperature on the Rate of Reaction (Hemolysis, Agglutination, Precipitation). M. H. Noguchi and L. Walbum, Copenhagen.
126 Formation of True Bone with Cellular (Red) Marrow in a Sclerotic Aorta. C. H. Bunting, Baltimore.
127 Relation of Types of Diarrhea in Children to Strains of Bacillus Dysenteric. J. H. M. Knox, Jr., and E. H. Schorer, Baltimore.
128 Studies on the Influence of Tension in the Degeneration of Elastic Fibers of Buried Aortæ. W. H. Harvey, Toronto.
129 Experimental Myocarditis; A Study of the Histologic Changes Following Intravenous Injections of Adrenalin. R. M. Pearce, Albany, N. Y.
130 Enzymes in Phagocytic Cells of Inflammatory Exudates. E. L. Opie, New York.
131 Toxicologic Constitution of Amanita Phalloides. W. W. Ford, Baltimore.
132 Morphology and Reproduction of the Spirochæta Pallida and a Rapid Method for Staining the Organism. L. B. Goldhorn, New York.
133 Glycylprolin Anhydride Obtained on Tryptic Digestion of Gelatine. P. A. Levene and W. A. Beatty, New York.
134 Phosphotungstates of Certain Aminoacids. P. A. Levene and W. A. Beatty, New York.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

May 19.

1 *Lung Complications After Operations with Anesthesia. G. E. Armstrong.
2 *Postanesthetic acetonuria. L. Beesly.
3 Subphrenic Abscess Complicating Empyema; Resection of Ribs; Cure. E. W. Archibald.
4 *An Improved Method of Performing the Pancreatic Reaction in the Urine. P. J. Cammidge.
5 *Extroversion of the Bladder. C. J. Bond.
6 Tonsillitis in Convalescence from Diphtheria. J. D. Rolleston

1. **Lung Complications After Anesthesia.** — Armstrong studied 2,500 cases of ether anesthesia, the anesthetic being administered in nearly all cases by means of the Clover inhaler. Among the 2,500 cases, 55, or 2.2 per cent., developed some lung complications; 32, or 1.28 per cent., came to autopsy. The youngest patient was 1 year of age and the oldest 78. There were 40 males and 15 females, that being about the proportion in which the sexes are represented in the operations. Out of 55 cases that developed lung complications, 35 occurred during the cold months of the year, from November to March inclusive. Not one instance of lung complication occurred in the last 500 cases. The lung complications all developed within forty-eight hours after the administration of the anesthetic. Of the 55 cases, 37 had some septic focus before the development of the lung complications. In 8 cases the presence of emphysema was noted before the administration of the anesthetic. In one case the patient suffered from chronic bronchial asthma, and in 9 cases chronic nephritis was present.

The 55 cases are again divided as follows: 1. Among the 14 cases of lobar pneumonia there were 10 of sepsis of some form. In 8 of these there was peritonitis, 3 being due to typhoid perforation; 3 patients had chronic nephritis, 1 aspirated vomitus, 1 suffered from fractured ribs, and 1 from diabetes. 2. There were 16 cases of bronchopneumonia, among them being 12 cases of sepsis of some form, including 6 cases of peritonitis, 1 of which was secondary to typhoid perforation; 3 had nephritis, 4 aspirated food or vomitus, 3 were trephining cases, and in 6 there was pre-existing emphysema. 3. Among the 19 cases of bronchitis there were 5 of trephining, in 7 there was peritonitis, in 3 nephritis; in 2 there was pre-existing emphysema, 1 with chronic bronchitis; in 1 there was typhoid perforation, and another patient had tracheotomy performed; this one aspirated blood. 4. Of the 3 cases of plastic pleurisy 2 were associated with tuberculous cervical adenitis, and 1 with cancer of the sternum; all these recovered. 5. There was 1 case of pleural effusion occurring in a patient suffering from suppurative mastitis with pleurisy on the same side. 6. There were 2 cases of empyema, 1 following excision of an epithelioma from the lower lip. There was no history of pneumonia preceding the empyema. One followed an operation for appendicitis with abscess and generalized peritonitis.

Armstrong reviews the causes for the occurrence of these complications which seem to show that the administration of ether *per se* was not a very active cause. In nearly all instances other more highly probable etiologic factors were pres-

ent, such as aspiration from the mouth and pharynx, and the operation performed, the abdominal operations predisposing markedly to the occurrence of these complications.

2. **Post-Anesthetic Acetonuria.**—Beesly summarizes his paper as follows: 1. Two separate conditions should be recognized—acute and chronic acetonuria. 2. Ether and chloroform invariably induce a temporary acute acetonuria which may be very detrimental even to an apparently healthy organism. 3. This acute anesthetic acetonuria is accompanied by symptoms of acid intoxication, sometimes ending in death, when the kidneys are unable to cope with the increased formation of acetone by a corresponding capability of excretion. 4. Although ether may produce a greater acetonuria, this is less harmful than that produced by chloroform, because ether is less injurious to the cells of the liver and kidneys, and thus does not hinder their power of elimination. 5. The more plentifully and rapidly excretion is carried on the less serious is the poisoning. 6. The effects of the poisoning are mitigated by the administration of alkalies, which may also be given with advantage before operation if poisoning be anticipated. 7. The usual risks of anesthesia are not increased by pre-exisent chronic acetonuria. 8. Anesthesia is dangerous with pre-existent acute acetonuria, especially if the anesthetic is chloroform. 9. A guarded prognosis must always be given when acute acetonuria is present with symptoms of poisoning. 10. Death following the administration of chloroform with symptoms of poisoning may be due to the idiosyncrasy of the patient.

4. **Pancreatic Reaction in the Urine.**—The details of Cammidge's improved method of examining the urine in suspected cases of pancreatic diseases are as follows: A specimen of the twenty-four hours' urine, or of the mixed morning and evening secretions, is filtered several times through the same filter paper and examined for albumin, sugar, bile, urobilin and indican. A quantitative estimation of the chlorids, phosphates and urea is also made, and the centrifugalized deposit from the urine examined microscopically for calcium oxalate crystals. If the urine is found to be free from sugar and albumin, and of an acid reaction, 1 c.c. of strong hydrochloric acid (specific gravity 1.16) is mixed with 20 c.c. of the clear filtrate, and the mixture gently boiled on the sandbath in a small flask, having a long-stemmed funnel in the neck to act as a condenser. After ten minutes' boiling the flask is well cooled in a stream of water, and the contents made up to 20 c.c. with cold distilled water. The excess of acid present is neutralized by slowly adding 4 grams of lead carbonate. After standing for a few minutes the flask is again cooled in running water and the contents filtered through a well-moistened, close-grained filter-paper until a perfectly clear filtrate is secured. The filtrate is then well shaken with 4 grams of powdered tribasic lead acetate and the resulting precipitate removed by filtration, an absolutely clear filtrate being obtained by repeating the filtration several times if necessary. The large amount of lead in solution is removed either by treatment with a stream of sulphuretted hydrogen or by precipitating the lead as a sulphate. For this purpose the clear filtrate is well shaken with 2 grams of finely-powdered sodium sulphate, the mixture heated to the boiling point, then cooled to as low a temperature as possible in a stream of cold water, and the white precipitate removed by careful filtration; 10 c.c. of the perfectly clear transparent filtrate is made up to 18 c.c. with distilled water and added to 0.8 gram of phenylhydrazin hydrochlorate, 2 grams of powdered sodium acetate and 1 c.c. of 50 per cent. acetic acid contained in a small flask fitted with a funnel condenser. The mixture is boiled on a sandbath for ten minutes, and then filtered hot through a filter paper moistened with hot water into a test-tube provided with a 15 c.c. mark. Should the filtrate fail to reach the mark, it is made up to 15 c.c. with hot distilled water. In well-marked cases of pancreatic inflammation a light yellow, flocculent precipitate should form in a few hours, but it may be necessary to leave the preparation to stand over night before a deposit occurs. Under the microscope the precipitate is seen to consist of long, light yellow, flexible, hair-like crystals, arranged in sheaves which, when irrigated with 33 per cent. sulphuric acid, melt away and disappear in from ten to fifteen seconds after the acid first touches them.

The urine employed for the experiment should be fresh, and not have undergone fermentative changes. If alkaline in reaction it should be made acid with hydrochloric acid before the test is commenced; any glucose that may be present should be removed by fermentation after the urine has been boiled with the acid, and the excess neutralized.

5. **Extroversion of Bladder.**—Bond reports a case of extraperitoneal rectal implantation of the ureters for extroversion of the urinary bladder in a young man 17 years of age. Three years after the operation the patient had practically no difficulty with the urine, which is voided from the bowel four or five times in the twenty-four hours.

The Lancet, London.

May 19.

7 Preservation of Health Among the Personnel of the Japanese Navy and Army. B. Takaki.
8 Autointoxication; Its Relation to Certain Disturbances of Blood Pressure. H. B. Shaw.
9 *Cheyne-Stokes Phenomenon in Acute Cerebral Compression. W. Trotter.
10 *Action on Bacteria of Electrical Discharges of High Potential and Rapid Frequency. A. G. R. Foulerton and A. M. Kellas.
11 *Peculiar Form of Hemoptysis with Presence of Numerous Spirochete in the Expectoration. A. Castellani.
12 Hypertrophy and Dilatation of the Heart in a Child Without Valvular Disease or General Adhesion of the Pericardium. G. Carpenter and T. Fisher.
13 Ossification of the Fontanelles and Closure of Sutures at Birth —a Cause of Difficult Delivery. T. L. Lynch.
14 Note on the Influence of Antitoxic Serum on the Tuberculo-Opsonic Index. T. R. Bradshaw.
15 Extensive Rupture of the Liver Without External Injury. F. S. Lloyd.

9. **Cheyne-Stokes Phenomenon in Cerebral Compression.**—The features of the occurrence of periodic phenomena in cases of cerebral compression on which Trotter lays special stress are as follows: 1. The Cheyne-Stokes phenomenon is in such cases no mere terminal symptom and, therefore, of necessarily slight interest, but one of the most characteristic forms of the vasomotor reaction and one which may be manifest nearly from the onset of compression. 2. Various modified forms of the phenomenon occur and may cause confusion, especially when the respiratory periodicity is absent. 3. Periodic movements are no less frequent and characteristic than the phenomenon occurs in disease and that they may be of diagnostic importance in rendering manifest a paralysis and in being movements which are to be distinguished from those due to focal irritation.

10. **Action of Electrical Discharges on Bacteria.**—Foulerton and Kellas conducted an elaborate series of experiments with the view of determining the action on bacteria of electrical discharges of high potential and rapid frequency. In all the experiments in which a decided germicidal effect was observed it appeared that this was due entirely to the action of substances formed as the result of electrical action on the atmosphere in which the discharge occurred; and it appeared that under the time conditions of the experiments the electrical force employed was not capable of exercising any injurious action on the bacteria tested. And it is probable that when in medical practice cases of lupus and certain other cases in which there is an exposed ulcerated surface are treated by "high-frequency" discharges, the results produced are due entirely to the action on bacteria of nitrous and nitric acids formed in the neighboring air. From a therapeutic point of view the use of high-frequency discharges in such cases must be looked on mainly as an efficient method for bringing germicidal substances in a nascent and very active condition into contact with the bacteria present in the lesion exposed to the action of the discharge.

11. **Hemorrhagic Bronchitis.**—Castellani reports two cases of hemorrhagic bronchitis, the disease having begun gradually and without any apparent cause. The sputum was examined carefully repeatedly for three weeks, but no tubercle bacilli could be found. Several guinea-pigs were also inoculated with negative results. The expectoration, especially when much blood was present, was teeming with spirochetes. The saliva and superficial scrapings from the gum were also examined; some spirochetes were present, but always in small numbers. The spirochetes were always very numerous and stained well by

the Leishman method, generally taking up a bluish tint; they could be stained also with the ordinary anilin dyes, though not so well. They were generally mixed with some bacteria, but sometimes when the sputum was collected in sterile Petri dishes and preparations made at once they were practically the only germs present. Vincent's fusiform bacilli were never observed. These spirochetes were not all alike. They are divided morphologically into several groups: 1. Very thick individually, from 15 to 30 microns in length, with irregular waves which varied in number but were never very numerous. The parasites, with the Leishman method, stained deep blue; they were ponited at both ends. 2. Spirochetes resembling the *Spirochæta refringens* (Schaudinn) with a few graceful waves and pointed extremities. 3. Thin, delicate spirochetes with numerous small, rather uniform waves and tapering ends. Sometimes one of the extremities was blunt while the other was pointed. 4. Very delicate parasites, though thicker than the *Spirochæta pallida*, with very few waves, generally irregular in shape.

Journal of Tropical Medicine, London.
May 15.

16 *The Puru of the Malay Peninsula. (To be continued). T. D. Gimlette.
17 Anatomy of the Biting Flies of the Genera *Stomoxys* and *Glossina*. G. M. Giles.
18 Rhinopharyngitis Mutilans. C. W. Branch.

16. **Puru.**—Under this name Gimlette describes a specific eruptive disease indigenous in the Malay states and attacking, particularly, young children. The sores are scattered over the face, neck, trunk and extremities. The viscera are not attacked. The affection is one of long standing. One attack confers immunity. It is distinct from syphilis.

Revue de Chirurgie, Paris.
Last indexed, page 1652.

19 (XXVI, No. 5.) Sur 2 cas d'angiomes primitifs des muscles striés. P. Reclus and A. Magitot.
20 Cas de calcul de la glande sous-maxillaire. G. Alexandre.
21 *Les hernies et les accidents de travail (hernia and insurance against industrial accidents). P. Berger. (Commenced in No. 4.)
22 *L'occlusion intestinale par l'hiatus de Winslow. E. Jeanbrau and V. Riche. (Commenced in No. 4.)

21. Hernia and Insurance Against Industrial Accidents.—Berger has been making a study of the etiology and origin of hernia, especially with regard to the influence of overstrain or accidents while at work. He outlines the conduct for the examining physician in case of an industrial accident, his conclusions harmonizing with the views adopted at the international congress for workingmen's insurance held in Belgium last year, and also with recently published manuals on industrial accidents. In the great majority of cases the hernia is not a sudden accident; it is an infirmity made imminent by some congenital malformation.

22. Internal Hernia Through the Foramen of Winslow.—This article is based on personal clinical experience and 18 cases from the literature. When the patient is examined soon after the occurrence of the hernia, a round, circumscribed tumor is noticed in the epigastrium or at the umbilicus, but it soon blends into the increasing general distension of the entire abdomen. This early tumefaction is important for the diagnosis. It may be directly in the center or more toward the right, and its center may coincide with the umbilicus or lie considerably above it, but always below the costal arch. In none of the cases on record was the trouble correctly diagnosed. In some it was overlooked even at the laparotomy. The small intestine is generally involved. The stomach is forced forward and the afferent loops of intestine are distended and held immovable under the liver, high up to the right. No hernial sac is visible except in the rare cases in which the intestine has slipped between the two sheets of the great omentum. When the finger is able to trace the course of the incarcerated intestine, the pulsations of the large hepatic artery can be perceived. In the 11 cases in which an operation was undertaken it proved to be too late to save the patient in all but four instances. An incision into the intestine should be made to evacuate it, after which reduction of the hernia is easy. There is a sheet of loose cellular tissue, between the vena cava and the duodenum, through which it is easy to expose the lower part of the foramen of Winslow after incising the anterior sheet of the lesser omentum over the upper duodenum, parallel to its longitudinal axis.

Semaine Médicale, Paris.

23 (XXVI, No 20.) Du bruit de galop de l'hypertrophie du coeur gauche (of left heart). L. Bard (Geneva).

Revue de Médecine, Paris.
Last indexed, page 1732.

24 (XXV, Nos. 11-12.) Le coeur dans la maladie de Friedreich (the heart). M. Lannois and A. Porot.
25 Nouveau cas de myasthénia gravis, suivi d'autopsie. Leclerc and Sarvonat (Lyons).
26 *Des crises épileptiformes d'origine pleurale. M. Roch (Geneva).
27 *Les sciatiques radiculaires. L. Lortat-Jacob and G. Sabarenau.
28 Derniere épidémie de fièvre typhoïde et des fièvres gastro-intestinales par auto-infection à Athènes. S. J. Kanellis (Athens).
29 *Le point épigastrique dans l'emphysème pulmonaire et dans les cardiopathies. H. de Brun (Beyrouth).
30 Etude du cancer massif du foie (of liver). H. Girard (Bordeaux).
31 (XXVI, No. 1.) *Recherches expérimentales sur l'influence du sucre sur le travail (influence of sugar on working capacity). C. Féré.
32 *Les causes morbides prédisposantes en pathologie mentale. E. Marandon de Montyel.
33 Education de la respiration. Son rôle dans la cure d'air. Résultats de 107 cas. M. Faure and C. Reymond.

26. Epileptiform Seizures of Pleural Origin.—Roch reviews 54 cases of convulsions suggesting epilepsy in which the inciting cause was some affection involving the pleura. The pleurisy in some cases favored the development of convulsions primarily due to other causes, but in others the pleurisy was evidently the sole inciting cause. This action is manifestly a reflex phenomenon. It was observed unmistakably in 4 well-defined cases. This assumption is also sustained by the cases on record of severe nervous disturbances in pleuritics, independent of operative trauma, such as coughing, hemiplegia or sudden death.

27. Radicular Sciatica.—This article discusses the diagnostic and prognostic importance of the topography of the disturbances in the objective sensibility in the course of sciatica, neuralgic, neuritic or radicular. In the 6 cases of the latter variety reported in detail with diagrams, 3 of the patients were syphilitics, 2 alcoholics and 1 tuberculous. In sciatic neuralgia and neuritis the trunk of the nerve is altered or compressed at some point, and the sensory disturbances are of the segmentary type. In addition there is a type of sciatica due to alteration of one or more of the roots which constitute the sciatic nerve.

29. "Epigastric Point" in Emphysema of the Lungs.—De Brun calls attention to the painful point observed in heart affections or with disturbances in the pulmonary circulation. The right ventricle can not become dilated without causing pain, whether the dilatation is due to emphysema of the lung or to a mitral lesion. This tenderness, De Brun states, is thus a valuable, hitherto unappreciated, symptom of something wrong in the right ventricle from disturbances in the pulmonary circulation. Fifty-four case histories are summarized to sustain this view. The first refers to a woman of 67 who had suffered for ten years from a singular and severe gastralgia. All kinds of treatment had been instituted without relief. There was no dyspnea, but there were evidences of pronounced emphysema of the lungs, and the gastralgia was aggravated by everything that would aggravate a cardiac lesion. Under the influence of potassum iodid relief was obtained within twenty-four hours, with a permanent cure of the gastralgia. Sixteen years's experience has confirmed this connection between the pain in the stomach and some disturbance in the pulmonary circulation, and the prompt relief under potassium iodid or heart tonics. The pain is usually in the upper part of the epigastric region. The sensation is sometimes that of oppression, tension and a dull pain, sometimes extremely intense pain, radiating to the lower part of the back. The pain is permanent and is usually aggravated by reclining, and it is always increased by pressure. It is also always accompanied by hypertrophy of the right heart and pulsation visible in the epigastrium. It may accompany or just precede asystolia.

31. Influence of Sugar on Working Capacity.—The results of Ferê's extensive experiences may be summarized in the

statement that sugar has a stimulating action, but, like all stimulants, its use is followed by a period of depression. Sweets for dessert stimulate digestion and disguise the fatigue of digestion, but it is a question whether there is not a deficit left after this transient stimulation.

32. **Causes of Mental Pathology.**—De Montyel recognizes six conditions alone as able to cause a mental affection, and then only in the predisposed. They form three groups: 1, the infectious group, with typhoid fever and chronic malaria; 2, the toxic group, with chronic alcoholic and lead poisoning, and 3, the physical group, with traumatism of the skull and sunstroke.

Archiv f. klinische Chirurgie, Langenbeck's, Berlin.

Last indexed, page 1568.

34 (LXXVIII, No. 4.) *Infektiöse und krebsige Geschwülste an den äusseren Geschlechtsorganen des Hundes (cancer on external genitals of dogs). A. Sticker.
35 *Zur Kasuistik und Histologie des Hautkrebses (superficial cancer). H. Coenen.
36 *Fall von erworbener Elephantiasis der Kopfschwarte (of scalp). G. v. Saar.
37 Zur Wangen-Plastik (of cheek). T. Meissl.
38 Ueber kongenitale Luxation, sowie angeborenen Defect der Patella, combiniert mit Pes varus congenitus. P. Ewald.
39 *Ueber die experimentelle Pankreas-Erkrankungen. H. Guleke.
40 Ueber Intraabdominale Hernien und iliacale Bauchfelltaschen (pockets in omentum). Krumm.
41 *Plastische Operationen an den Ohren (Stellungsverbesserung, Verkleinerung) (to improve shape, etc., of ear). E. Payr (Graz).
42 Die Brüche der Tuberositas ossis metatarsi V. und des Processus posticus tali und ihre Beziehungen zum Os vesalianum und Trigonum (study of fractures). Lilienfeld.
43 *Beitrag zu den Total-Luxationen der unteren Halswirbelsäule (lower cervical vertebræ). F. Steinmann (Berne).
44 (LXXIX, No. 1.) *Tuberculose der Thorax-Wand mit bes. Berücksichtigung der Rippen-Tuberculose auf Grund klinischer Beobachtungen. F. König.
45 *Spät-Resultate nach complicierten Schädelbrüchen (fractures of skull). F. Brewitt (Körte's service, Berlin).
46 Enterokystome und ihre chirurgische Bedeutung. F. Colmers.
47 Versuche ueber Händedesinfection. Schumburg.
48 Die Intermediär-Operation bei acuter Appendicitis. Sprengel.
49 *Zur Technik der intravesicalen Operations-Methode. B. Klose.
50 *Fall von Enterocele; Resection des Darms nach eigenem Verfahren. I. Antonelli.
51 *Test for Chlorin in Urine.—Einfaches Verfahren zur approximativen Bestimmung des Chlor-Gehalts im Urin. G. Ekehorn.
52 (No. 2.) Die angeborenen Fisteln der Unterlippe und ihre Entstehung (congenital fistulas of lower lip). A. Stieda.
53 Die Lymphangiectasie der Leiste und andere Folgeerscheinungen der Lymphstauung (congestion of lymph in groin and its consequences). H. Gross. (Concluded.
54 *Ueber Myelomatose, Leukämie und Hodgkin'sche Krankheit. R. Hoffmann.
55 *Experimentelle Beiträge zur Lehre des Verbrennungstodes (fatal burns). A. Helsted
56 *Das hypernephroide Carcinom und Sarkom. Zur Lehre der von versprengten embryonalen Keimen ausgehenden malignen Geschwülste. H. Neuhäuser.
57 *Ueber operativ behandelte subcutane Verletzungen des Magendarmcanals (injuries of stomach or intestines). E. Vosswinckel.
58 Zur Behandlung peripherer Aneurysmen. O. v. Frisch (von Eiselsberg's clinic, Vienna).
59 Zur Erklärung der Explosions-Schüsse (exploding shots). Hildebrandt.
60 Zur Casuistik des Echinococcus der verschiedenen Organe und Gewebe des menschlichen Körpers. A. Kablukoff (Simferopol).

34. **Cancer on Genitals of Dogs.**—Sticker reviews the literature on the subject of malignant tumors on the external genitals of dogs, and shows that the tumors observed by various writers were all practically of the same type, round-celled sarcomas. While ordinary infectious processes start in the mucosa, as a rule, the sarcoma always develops from the submucosa and is solitary. Several instances are known of transmission of the sarcoma by coitus, but this may have been due to contact transplantation of tissue in some excoriation, and can not be used as an argument in favor of the contagious nature of the affection. Spontaneous transplantation under these circumstances is favored by the superficial location of the sarcoma and its tendency to break through to the surface. Sticker observed several instances of the healing of a transplanted sarcoma, while in the controls the sarcoma progressed to a fatal termination. He affirms that this is the first time that it has been demonstrated experimentally that cancer can heal spontaneously. Animals who thus spontaneously recovered from their malignant growth were not susceptible afterward to further transplantation, but acquired active immunity to cancer. The malignant growth can be transmitted to another animal only by transplantation of the intact cells of the growth, while an infectious process can be transmitted by inoculation with the virus, free from cells. Infectious processes induce metastasis only by way of contact infection, but a sarcoma may develop metastasis in any of the internal organs.

35. **Superficial Cancer.**—In Coenen's first case, the patient, a woman of 79, presented a carcinoma on the right cheek near the nostril, and a second, entirely separate, carcinoma on the left cheek just below the eye. In 6 other cases observed in the clinic, and in several others reported in the literature, multiple carcinomas were observed on the face and neck. Seborrheic eczema of the face seems to favor the development of multiple cancers, as also working in paraffin and in tar. In the second case illustrated an adenocarcinoma had developed on the chest of a man of 69, at about the third rib. The few similar cases of cancer on the trunk are reviewed and the pathogenesis discussed.

36. **Elephantiasis of the Scalp.**—Under the influence of repeated trauma a small tumor developed on the side of the brow and head which gradually assumed the characteristics of acquired elephantiasis.

39. **Experimental Pancreas Affections.**—Guleke has been studying on a large number of dogs the affections of the pancreas induced by injection of oil, bile or blood, in the outlet of the pancreas, or by ligature of its blood vessels. The resulting disturbances closely resembled those of acute pancreatic affections in man. The essential feature in all seemed to be necrosis of the pancreas. The intensity and the extent of this necrosis were the decisive factors for the course of the affection. The hemorrhages, especially the so-called apoplexies, were more or less subordinate features, although of the greatest importance in the etiology. His experiments further demonstrated that in acute necrosis of the pancreas death is due essentially to intoxication with trypsin. In the chronic cases the disturbances are more in the nature of those observed after extirpation of the pancreas, but in the acute cases everything points to trypsin intoxication. This assumption is confirmed by the fact that it proved possible to immunize dogs against trypsin intoxication and against transplantation of pancreas tissue, otherwise fatal.

41. **Cosmetic Operations on Ears.**—Payr has had gratifying results in operations undertaken to reduce the size of overprominent ears. The special features of his technic are the excision of a vertical, sickle-shaped piece of cartilage from the back of the ear, the outer edge parallel to the rim of the ear. The next step is the partial detaching of a broad horizontal strip at right angles to the first, its base being left attached. This strip is turned back and drawn under a bridge flap cut in the periosteum of the mastoid process. By traction on this flap the ear is drawn back more nearly parallel to the head. The cross-shaped defects left in the ear are sutured and the skin over them, thus materially reducing the size of the ear and bringing it back parallel to the head. The pieces of cartilage are easily mobilized and the excess of skin left in front by the reduction in size was soon taken up by the growth of the child in his cases. Fifteen illustrations accompany the article.

43. **Total Luxation of the Spine.**—Steinmann has found records in the literature of 19 cases of total luxation of the spine between the second and seventh cervical vertebræ without irreparable injury to the spinal cord. He gives a summary of each and then describes a case personally observed. There were no signs of paralysis of the limbs, rectum or bladder in his patient, and no disturbances in swallowing or breathing, and yet radiography and the position of the head, etc., indicated total forward luxation of the fifth cervical vertebra with fracture of the sternum. In all the cases the accident had been a fall or blow on the head or back of the neck. In 4 of the cases the paralysis vanished at once when the luxation was reduced. In only one of the 20 cases did partial paralysis persist. In 12 the attempt at reduction proved successful; in one case the luxation was reduced under mere orthopedic measures, and in 7 no attempt at reduction was made. Six of this latter group remained permanently free from paralysis, although much hampered by the abnormal position of the head and restriction to movement, the condition growing constantly

worse instead of better. Steinmann concludes from his analysis of all this material that in all recent cases the dislocation should be reduced whether there are signs that the spinal cord is injured or not. But as it is often impossible to distinguish whether the luxation is accompanied by fracture or not, the technic should be such as to do no harm in case of fracture. The spine should be stretched with lengthwise extension and then a very slight push backward or bending of the upper part of the spine will generally bring the parts into place or they spring into the proper place spontaneously. In no event must the pathologic position of the dislocated vertebra be aggravated, as this is liable to compress the spinal cord still more. Anesthetics are contraindicated when there are disturbances in respiration owing to injury of the roots of the phrenic nerve by a high luxation. On the other hand, anesthesia facilitates palpation and aids in relaxing the muscles for the extension. When the luxation is more than a few days old, the possibility of fibrous adhesions should make the surgeon hesitate about interfering. If, however, the spinal cord is known to be intact, simple extension could scarcely do harm, although no attempt at reduction of an old luxation of the kind is on record. It might be possible to remove the spinous process and part of the dislocated vertebra—a procedure which Steinmann is ready to undertake in his case if conditions become aggravated by callus formation and subsequent compression of the cord. Lengthwise extension can be done with confidence, as the ligaments in these parts stand great traction without laceration; even in children, tearing of the ligaments is the rarest exception. The danger of transportation and of delay impose it as a duty on the attending physician to reduce the dislocation at once, even when there are signs of injury of the cord. The article is illustrated.

44. **Tuberculosis of Thorax Wall.**—König's article is based on 110 cases. No age or sex seemed to predominate. He gives summaries of all the cases and insists on the necessity for removal of the focus into sound tissue, as in treating a malignant growth. Four of the patients succumbed during or soon after operation, but 73 were dismissed cured and known to be in good health for some time afterward. In 33 cases the patients left before the wound had entirely healed. The cases in which the lesion was under the breast sometimes required several operations before a complete cure was finally attained. The breast had to be turned back or amputated. He always dusted the defect with iodoform before closing the wound, with or without drainage or gauze packing. The wire saw was sometimes found useful. Resection of the cartilage generally proceeded more easily when the incision was made with the knife down on an elevator introduced beneath.

45. **Remote Results After Complicated Fractures of the Skull.**—Brewitt studies here the remote results in 72 cases of complicated fracture of the skull in individuals between 2 and 65 years of age. All but 7 were males. Ten of the patients succumbed to their injury, and 2 still had slight symptoms when dismissed, but 60 were freed from all disturbances. Of the latter group 41 have been examined again recently. Of the 38 patients treated by reimplantation 24 are in good health, 2 have slight and 2 such severe disturbances that they are unable to work. None has developed epilepsy. In the 4 patients treated by a secondary plastic operation, 3 are in good health, but 1 has considerable trouble. An open defect in the skull was left in 30 cases, and only 9 of these patients are in good health to-day; 2 have slight and 1 severe disturbances; 1 has epilepsy and 8 have succumbed to the consequences of their injury, while 9—all free from disturbances when dismissed—have been lost from sight. The reimplantation technic here, as in the experience of others, has maintained its supremacy. The aim should be to close a recently acquired defect in the skull as soon as possible, for the remote results in patients thus treated are much better than in those whose defect in the skull healed without attempt at closure. There is grave danger of injury to the exposed tissues from the ordinary trifling accidents of daily life, and the brain in such cases is less resistant to injury than under other conditions. The finest results were attained when the defect was closed with the fragments recently torn out.

49. **Intravesical Operating.**—Klose has modified the Nitze method of removing tumors in the bladder with the electrocautery. His snare is light and larger than the size of the tumor. Being made of steel, it stands traction well. He turns on the current for two or three seconds and then turns it off, repeating this alternately until the tumor has been entirely detached and drops off. The advantage of this rather tedious technic is the avoidance of all hemorrhage. He gives illustrations of his modified instrument and of a large tumor removed with it without the loss of a drop of blood.

50. **Enterocele.**—Antonelli describes his technic, which he styles the "perfecting of the familiar Murphy method." He reports its sucessful application in a case of circumscribed peritonitis with adhesions, the loops of the intestine involved being at the same time confined in an inguino-scrotal hernial sac.

51. **Test for Chlorin in Urine.**—Ekehorn uses a graduated glass tube about 15 mm. in diameter and 22 cm. long. The first line is engraved at the point corresponding to 2 c.c. of urine, and is marked U. Another line above is marked I and corresponds to 1 c.c. of the indicator. The third line is marked zero, and corresponds also to 1 c.c. The tube is graduated above this with lines marking the cubic centimeters up to 55 c.c. Two c.c. of the urine are placed in the tube and 1 c.c. of the indicator, up to the line I. The second reagent is then added until the tint changes. The test is a modification of Volhard's titration test.

54. **Myelomatosis, Leukemia and Hodgkin's Disease.**—Hoffmann defines myelomatosis as the multiple development of malignant tumors in the bone marrow, originating in hyperplasia of one of the cellular elements of the mother soil (lymphocyte, myelocyte, plasma cell). The tumor does not show the characteristics of the mother soil. Leukemia he defines as an affection of the blood, the prominent features of which are the increase in the lymphadenoid tissue as well as in certain groups of the white corpuscles. The hyperplasia in the lymph glands and bone marrow maintains the type of the fundamental tissue, and hence the increased output of the round cells in question. The morbific agent is similar to or the same as Flexner's lymph, spleen or myelo-toxin. As the first two or the third predominate there is a lymphocyte or a myelocyte leukemia. The hyperplasia of the lymphadenoid and the myeloid tissue is the expression, he states, of efforts at compensation or formation of antitoxin. Pinkus' pseudoleukemia with relative lymphocytosis and the histologic picture of leukemia must be regarded as a form of lymphocyte leukemia in which the overproduction just covers the loss of lymphocytes. Hodgkin's disease, on the other hand, consists in inflammatory hyperplastic processes in the lymphadenoid tissue, destroying its structure. No specific changes in the blood picture follow. The increase of the round cells, with the partial alteration of their types, eosinophiles, plasma cells, etc., and the profuse formation of connective tissue, may lead to the formation of large tumors.

55. **Prevention of Death from Otherwise Fatal Experimental Burns.**—Helsted announces that preventive artificial anemia of the region of a burn was able to prevent the death of the animal in his numerous experiments, within certain limitations of temperature. His examination of the blood in 30 cases of severe burns showed that determination of the proportion of hemoglobin is an important aid for the prognosis. In all the extensive fatal burns pronounced hemoglobinemia was observed, and it was present in slighter extent in all the cases of extensive burns showing impairment of the general health. In case of extensive burns without much effect on the general health, no hemoglobinemia was apparent. In his experimental work he found that an isolated lesion of the blood caused the same hemoglobinemia, hemoglobinuria and ventricular hemorrhage as in case of extensive cutaneous burns. For this isolated lesion of the blood he withdrew 10 c.c. of blood from the carotid artery of a rabbit and heated it in the water-bath to 60 C., then cooled it to body temperature and reinjected it into the artery. The effect on the rabbit was apparently the same as that of a severe fatal superficial

burn. When an Esmarch tourniquet was applied to the legs of a rabbit and the femoral arteries and veins were ligated, and the legs were then held in water at 60 C. for three minutes, the animals survived, with little disturbance, while all the controls, without the artificial anemia, succumbed in a day or so. The metabolism declines when part of the blood has been heated to the coagulating point of the fibrinogen. Numerous other experiments are related and an extensive bibliography on the subject of death from burns is appended.

56. **Hypernephroid Carcinoma and Sarcoma.**—Neuhäuser has been studying the collection of kidney tumors in the Jewish hospital at Berlin, 103 in all. No less than 69 belong to the group of hypernephromas. In 2 he found unmistakable evidence that true carcinoma had developed out of a hypernephroma. Displaced suprarenal germinal matter had lodged in the kidney in early embryonic existence, a hypernephroma had developed from this, and the carcinoma from the parenchyma of the hypernephroma. Neuhäuser is far from maintaining that embryonal displacement of germinal matter is the only cause of these cancers, but in these cases it was evidently the first embryologic cause, without which these carcinomas would never have developed. The same applies also to some cases of sarcoma developing in a hypernephroma which are in the collection. The sarcoma had developed from the stroma. Clinical details of the 9 cases with hypernephroid malignant growths are given in conclusion. There are three colored plates of the histologic findings.

57. **Operative Treatment of Contusion of Abdomen.**—Voswinckel gives the particulars of 17 cases of subcutaneous injury of the digestive tract in which an operation was done. He declares that the lesson learned from this experience is that operative treatment is imperative at the earliest possible moment when there is a probability that the stomach or intestines have been injured by a contusion. If the shock is too pronounced for immediate operation, every effort must be made to bring the patient out of the shock, with restoratives and saline infusion. Every moment lost adds to the danger of the development or progress of the almost inevitable peritonitis. Besides the signs of shock, the most important indication of a subcutaneous injury of stomach or intestines is the intense painfulness on pressure, generally at the injured point, and the rigid tension of the rectus muscles with the abdominal walls flat or drawn in. In case of small circumscribed injuries, it may be sufficient to suture the wound in the intestine and to reinforce it with serosa drawn up over it, but in case of extensive injury it is better to resect the injured portion. Even if the patient is not seen until after the peritonitis is established, an operation is always justified, although the prospects of saving life are then small. Careful rinsing out of the entire abdominal cavity with large amounts of sterile salt solution should never be omitted, he adds, as this is the only means of cleansing the peritoneal cavity of infectious material. Even if this is not entirely accomplished, yet in the larger proportion of cases the peritoneal cavity can thus be flushed out and the peritoneum left in condition to take care of the rest.

Berliner klinische Wochenschrift.

61 (XLIII, No. 10.) Coincidence of Changes in Size of Heart and Changes in Pulse.—Zusammenfallen von Volum-Veränderungen des Herzens mit Veränderungen des Pulses. M. Heitler.
62 Zur Kenntnis der Spirochaeten. W. Loewenthal.
63 Zur Symptomatologie der Paralysis agitans. M. Mosse.
64 Destruction of Both Eyes of a Tramp by Maggots.—Die Zerstörung beider Augen eines Menschen durch Fliegenlarven. Schultz-Zehden.
65 *Blood and Hemorrhages in Case of Affections of Digestive Tract.—Blut und Blutungen bei Verdauungs-Krankheiten. C. A. Ewald. (Concluded).
66 Ueber aktive Lymphocytose und Lymphocyten. (Concluded.) A. Wolff-Eisner.
67 Guide for Introducing Cystoscope.—Eine Leitvorrichtung zu Nitze's Kystoskop. C. Posner.
68 Importance of Infection for Infants.—Die Bedeutung der Infektion für den Neugeborenen und Säugling. B. Salge.

65. **Blood and Hemorrhages in Affections of Digestive Tract.**—Ewald has not been able to detect any characteristic formulas for the blood in diseases of the digestive tract. He states that the discovery of "occult" or invisible hemorrhage, in the stomach contents or in the feces, is a valuable aid in the differentiation of ulcer of the stomach and cancer, and cites a number of instructive examples from his own experience. He has not had very favorable results from the use of gelatin, adrenalin, etc., in treatment of gastric hemorrhage, but reports that he was able to arrest recurring profuse hemorrhage by rinsing out the stomach with ice water. Eight patients thus treated were much debilitated from the hemorrhages and all other measures had failed. As a last resort before calling on the surgeon, a small amount of morphin was injected, the throat was cocainized to prevent retching or vomiting from reflex irritation, and ice water was then poured in through the stomach tube. The tube was introduced only just past the cardia so as not to irritate the walls of the stomach. As more ice water was poured in the tube was pushed in a little farther, until the water flowed out clear from blood. It was astonishing how much blood-stained water was obtained in this way, with numerous clumps of blood, but the hemorrhage was definitely arrested. As blood in these cases passes into the intestines and decomposes there, he flushed out the intestines to prevent irritation from this source. In case of collapse he injects camphorated ether, 1 to 6, with enemas of wine with egg or peptone, and hot compresses to the hands and feet. In case of threatening hemorrhage with small pulse, anemic heart sounds and anemia of the brain, saline infusion is indicated. By introducing the saline solution through two needles at the same time, and massaging away the fluid as it enters, it is possible to inject as much as a liter of water in a very short time. He prefers the subclavicular region for the injection. The blood regenerates quite soon in favorable cases. The results to date of operative treatment of gastric hemorrhage are not very promising. Better prospects are opened by the recent announcement that gastroenterostomy is able to arrest hemorrhage and to prevent its recurrence, even when the actual source of the bleeding is not discovered. This result may be due to postoperative contraction of the dilated stomach. Hemorrhages from the lower rectum, especially hemorrhoidal, are very easily controlled. Cold sitz baths or introduction of pieces of ice or injection of ice water generally arrest them, and the tendency can be combated by astringent injections or applications. External nodules can be treated with an ointment of chrysarobin 0.8 gm.; iodoform, 0.3 gm.; extract of belladonna, 0.6 gm; and vaselin, 15 gm., rubbed in several times a day, the internal nodules with suppositories of the same. Each suppository consists of: Chrysarobin, 0.08 gm.; iodoform, 0.02 gm.; extract of belladonna, 0.01 gm., and cocoa butter to 2 gm. Two such suppositories are used daily. This not only arrests the tendency to hemorrhages, but shrivels and reduces the sensitiveness of the nodules. A frequent source of anemic conditions is afforded by continuous bleeding from unsuspected hemorrhoids high in the rectum. The stools do not show the presence of blood except by microscopic and chemical tests. Ewald has had good results in obstinate hemorrhoidal hemorrhages from the internal use of a mixture of coagulating, astringent and laxative drugs, calcium oxid, bismuth gallate, senna, etc.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

69 (XXXII, No. 14.) *Behandlung des Pleuraempyems. H. Braun.
70 *Praxis und Theorie des Ueberdruck-Verfahrens (over-pressure technic). L. Brauer.
71 *Die operative Behandlung der Hypertrophie und des Carcinoma der Prostata. H. Kümmell.
72 *Zur Radikalbehandlung der Colon-Carcinome. A. Neumann.
73 Erfahrungen ueber Bauchschusswunden (abdominal firearm wounds). A. Brentano.
74 *Zur Frage des ersten Transportes Schwerverwundeter (first transportation of the severely wounded). F. Colmers.
75 2 Bermerkenswerte Faelle von Gehirn-Chirurgie (of brain). Amberger.
76 (No. 15.) *Ein neuer Vorschlag zur Erzielung keim-freier Operationswunden (aseptic operating). A. Döderlein.
77 Ueber Lokalanästhesie in der Otochirurgie. H. Neumann.
78 *Ueber Perforation der Harnblase bei Ausschabung derselben (curetting bladder). C. Stern.
79 *Ueber chirurgische Behandlung der Ischias (sciatica). A. Pers (Copenhagen).
80 Incision in the Esophagus.—Ein Speiseröhrenschnitt. R. Burmeister.
81 Hemolytic Biologic Differentiation of Albumin.—Zur forensischen Eiweiss differenzierung auf Grund der hämolytischen Methode mittels Komplementablenkung, nebst Bemerkungen ueber die Bedeutung des Präzipitates für dieses Phänomen. E. Friedberger.

82 *Die Erbdisposition in der Phthise-Entstehung; ihre Diagnose und Behandlung (inherited predisposition). C. Spengler.
83 Further Experiences with Ultra-violet Light Treatment.—Weitere Erfahrungen ueber Uviolbehandlung, sowie einen neuen Apparat zur Bestrahlung des ganzen Körpers mittels ultra-violetten Lichtes (Uviolbad). Axman (Erfurt).

69. **Treatment of Empyema of the Pleura.**—Braun states in the course of this clinical lecture that he does not believe that puncture and aspiration are sufficient to cure empyema in the pleura, as a rule. An incision with resection of a piece of rib from 4 to 6 cm. long will provide much better conditions for evacuation of the pus and final healing. Ether is contraindicated by the usually coexisting bronchitis. In case of much dyspnea or debility, or if the pulse is weak and bad, general anesthesia must be avoided as it is liable to prove fatal at the time or soon after. Infiltration anesthesia will be found useful in these cases, as also for other adult patients who are not too timorous. None of the valve cannulas to prevent pneumothorax has proved effectual. To promote the expansion of the lung during the healing of the empyema chest gymnastics are needed. Braun urges his patients to blow a trumpet or to blow up an air cushion, or something of the kind, to insure deep expirations. Sometimes healing is delayed by suppuration in narrow passages leading upward, and they should be curetted or have 10 per cent. iodoform glycerin injected. In tuberculous empyema the indications are the same as under other circumstances if the patient is in good condition otherwise. Even in advanced pulmonary tuberculosis repeated tapping will bring great relief. Evacuation of the pus through the back, in the seventh or eighth interspace, with injection of 15 or 20 c.c. of 10 per cent. iodoform glycerin is liable to keep the patient in good condition for a long time. The injection can be repeated when the iodin has disappeared from the urine, which is generally in from two to five weeks. In case of bilateral empyema it is wise to wait until the patient has recovered from the operation on one side and the lung has expanded once more, before attempting intervention on the other side. He has thus treated and cured 2 patients. In case of an old empyema in a child, he advises injection of salt solution or of iodoform or carbolic acid, glycerin or hydrogen dioxid, which may cure without the necessity for more extensive operative measures. When the apex of the pleural cavity is involved, the operation may have to be in several stages with long intervals. The resection of the thorax, however, gradually restored the patient to almost normal health and strength if the empyema was not tuberculous. Such an extensive operation as resection of the thorax should not be attempted in case of a tuberculous process unless the patient is in good general condition.

70. **Practice and Theory of the Overpressure Technic for Operations in the Thorax.**—Brauer describes the mode of action of the underpressure and overpressure methods of maintaining the respiratory functions of the lungs unimpaired when the thorax is opened. The effect on the blood vessels is the same, he shows, whether the lungs are kept expanded by compressed air or by being opened up in rarefied air. The criticisms of one technic apply equally to the other, but the general results, on the whole, he thinks, are more favorable with his overpressure technic than with the Sauerbruch underpressure pneumatic cabinet.

71. **Treatment of Hypertrophied Prostate.**—Kümmel has had extensive experience with various methods of treating enlarged prostate. He has abandoned the operations of castration, resection of the vas and ligation of the afferent vessels, and now operates directly on the prostate by the high cut or perineal route. If these operations are refused or the general condition does not permit, he applies the Bottini technic. He remarks that spinal anesthesia is particularly suited for prostatectomy, and has materially reduced the dangers of the radical operation for hypertrophied or cancerous prostate. Hypertrophy of the prostate is generally progressive, and it soon proves impossible to introduce the small catheter which at first passes readily. For this reason, and also to aid in keeping the pasage open, he commences with quite a stout catheter, leaving it in place for several days in case of retention from enlargement of the prostate. If spontaneous urination does not follow its removal he introduces it again for another trial. If this also fails he advises operative interference. He remarks that the "catheter life" is never a long one, as the patients soon succumb to pyelonephritic and septic processes, as a rule.

72. **Radical Treatment of Carcinoma of Colon.**—Neumann has been much gratified with the results in 6 cases of carcinoma of the colon which he treated by first clearing out the bowel and later resecting the malignant process. He made an opening into the cecum in most cases, evacuated it, and prepared the bowel for the resection by injections and purgatives, the site and movability of the cancer being thus absolutely determined before attempting the secondary resection. The particulars of all his cases are given and also of 2 others treated by a different technic, with the death of one patient. He gives an illustration of the two skin flaps with which he closed the artificial anus when it was no longer needed. In one case the opening into the cecum was made Nov. 1, 1904; the left flexure in the colon was resected November 21, and in January, 1905, the fistula into the cecum was closed by a third laparotomy, and the patient left the hospital in apparently perfect health. In September she returned with a very large metastasis in each ovary and disseminated nodules on the serosa of the intestine. The ovarian tumors were removed by a fourth laparotomy, in October, 1905, and the patient has since been subjectively well. He followed Mickulicz's technic in 3 cases of cancer of the sigmoid flexure, with the complete cure of the patients to date. The results of thus operating in several stages far surpass those obtained by other less tedious technics, even although it may prove impossible in some cases to insure the final healing of the fistula into the intestine.

74. **First Transportation of the Wounded.**—Colmers was at Charbin and soon learned that any attempt to remove the wounded soldiers severely injured in the abdomen was almost certain death. On the other hand, they almost invariably recovered when left undisturbed except for the necessary operative measures. He consequently advises that the wounded of this class should be left on the battle-field after being made as comfortable as possible, the spot where they lie marked with a pennant, or a light tent set up over them. After all the other wounded have been carried off the field these wounded may be collected into one or more central points, and in case the army is retreating, be entrusted to the care of the enemy or left in charge of a physician and nurses. Many of the severely wounded in the late campaign would have recovered if they could have been spared the fatal transportation. He adds that the surgeon's time at first is better employed in tending a large number of slightly and moderately wounded men than in spending the same time in caring for one or two of the very seriously wounded.

76. **To Insure Asepsis in Operations.**—Döderlein has been investigating the bacteriologic findings under the latest improved aseptic technic. He has a number of sterile cotton pledgets ready in test-tubes, and during the course of the operation these pledgets are taken up with forceps and used as a swab to wipe off some part of the wound, instruments or operator's hands. The pledgets are placed at once in liquefied agar, which is then poured out on Petri dishes with the pledgets. In 5,000 such tests he found that even when gloves, masks and other modern devices to insure asepsis had been used, yet the bacteriologic findings were always positive. He advises others to make these tests now and then to verify the asepsis of their technic. The folds in rubber sheeting, rubber rings on vials, etc., are liable to harbor germs in large numbers even after supposed complete disinfection. After eliminating all these sources of germs he discovered that the patient's own skin was the perennial source of germs notwithstanding most careful preliminary disinfection. Asepsis on the part of the operator and instruments always encountered this nest of bacteria on the patient's skin. To prevent trouble from this source he now paints the skin with an impermeable coating of rubber. He found that collodion, celluloid dissolved in acetone, and similar varnishes cracked away from the skin as they dried, and left the edges of the wound exposed. This disadvantage he obviated by using a special mixture of rubber

with formalin, benzine and ether. The skin is cleansed, shaved and painted with tincture of iodin. It dries in a couple of minutes, when the rubber mixture is applied and dusted with talcum powder, which is brushed off again. The skin is then found covered with a very thin, clinging, impermeable membrane. Tests after an operation in which the field is thus protected show that there are no more germs than when the operation was begun. The organism is thus spared the struggle with germs introduced from the skin, while careful technic excludes germs from the exterior.

78. **Perforation of Bladder During Curetting.**—Stern describes a case of perforation of the bladder wall with a catheter curette. The patient was a thin woman of 57; the operation had been undertaken for the removal of a papilloma in the inflamed bladder. The distance had been carefully measured and the curette was introduced very cautiously, under chloroform, but almost at once the tip could be felt close under the abdominal wall. He advises against attempting to curette the bladder without opening the organ above. High incision allows oversight of the field and has direct curative action. It also prevents the bladder from contracting and thus favoring perforation.

79. **Successful Simple Surgical Treatment of Sciatica.**—Pers reports 2 very severe, old and obstinate cases of typical sciatica completely cured by surgical intervention. He exposed the sciatic nerve and found that it appeared red and dull, instead of presenting its usual shiny, ivory aspect. This appearance was due to the presence of a fine network of connective tissue fibers completely encircling the nerve and pinning it down. This network extended down to the junction of the middle and lower thirds. He cautiously removed this network, thus releasing the nerve and restoring its normal aspect. The diagnosis was perineuritis resulting from an extinct or existing neuritis. In both cases the patients were completely freed at once from all their neuralgic troubles.

82. **Diagnosis and Treatment of Inherited Predisposition to Phthisis.**—Spengler styles the inherited syphilitic taint the one important inherited predisposition to consumption. The syphilitic taint may be so slight as not to be recognizable by ordinary diagnostic aids. It may date from the third or fourth preceding generation, he states, but it can be detected by the tendency to interposed harsh breathing (Rauschen). The inspiration begins with vesicular breathing, but this ceases abruptly and is followed by harsh breathing as the inspiration continues, followed by normal or vesico-bronchial expiration. This interposing of the harsh breathing is extremely characteristic. The anatomic basis of the sound is proliferation of the connective tissue or hypertrophy of a cirrhotic lung, similar to the hypertrophic cirrhosis of the syphilitic liver. Another sign of this latent inherited syphilis is the tendency to scaling after injection of his Perlsucht tuberculin. He has noticed further that all persons with a tendency to rachitis exhibit the same harsh breathing and scaling, and this has convinced him that rachitis is the result of syphilis in some preceding generation. Other signs of this special predisposition are a tendency to snoring breathing; the lack of proportion between the extent of the physical signs of tuberculosis and the slight general manifestations; the early and predominant tuberculous involvement of the larynx, especially in case of existing diabetes in comparatively young subjects; the obstinate anemia unexplained by the pulmonary affection, and the intense hyperleucocytosis in the sputa with disintegration of the nuclei. He presents evidence to prove that it is easy to control this predisposition and, by holding it under control, to remove the factors that favor progression of the tuberculous infection. He accomplishes this by means of the percutaneous administration of iodin, rubbing it into the skin in the form of a salve. Iodin internally is ineffectual. The characteristic symptoms rapidly subside under this treatment, supplemented perhaps by inunctions with corrosive sublimate. As these symptoms subside the conditions predisposing to tuberculosis are banished. He has been able to cure 100 per cent. of his patients with tuberculosis in the early stages by combining this iodin with his bovine tuberculosis tuberculin treatment. The leucocytes of these *Erbdisponierter*, as he calls them, are less bactericidal than normal leucocytes, and it is exceptionally hard to confer agglutinating properties on their serum. After adequate iodin treatment, however, these differences from the normal are no longer seen.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE PRACTICAL MEDICINE SERIES, Comprising ten volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of G. P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. III. The Eye, Ear, Nose and Throat. Edited by C. A. Wood, C.M., M.D., D.C.L., A. H. Andrews, M.D., and T. P. Head, M.D. Series 1906. Cloth. Pp. 368. Price, $1.50. Chicago: The Year-Book Publishers.

INTRODUCTION TO MATERIA MEDICA AND PHARMACOLOGY, Including the Elements of Medical Pharmacy, Prescription Writing, Medical Latin, Toxicology, and Methods of Local Treatment. By O. T. Osborne, M.A., M.D., Professor of Materia Medica, Therapeutics and Clinical Medicine in the Yale University. Cloth. Pp. 167. Price, $1.00 net. Philadelphia: Lea Brothers & Co., 1906.

HEALTH'S MANUAL OF MINOR SURGERY AND BANDAGING for the Use of House Surgeons, Dressers and Junior Practitioners. Thirteenth Edition. Revised by B. Pollard, F.R.C.S., Surgeon to University College Hospital, and Teacher of Operative Surgery in University College, London. Cloth. Pp. 409. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co., 1906.

COLLECTED STUDIES ON IMMUNITY. By Prof. P. Ehrlich, Privy Councilor and Director of the Royal Institute for Experimental Therapy, Frankfürt, Germany, and by his Collaborators. A Chapter written expressly for this Edition by Professor Ehrlich. Translated by C. Bolduan, First Edition. Cloth. Pp. 586. Price, $6.00. New York: John Wiley & Sons, 1906.

DISEASES OF THE NOSE AND ITS ACCESSORY SINUSES. By H. L. Lack, M.D., F.R.C.S., surgeon to the Throat Department of the London Hospital and Lecturer on Diseases of the Throat to its Medical College, etc. With 124 Illustrations. Cloth. Pp. 399. Price, $8.50 net. New York: Longmans, Green & Co., 1906.

CONSUMPTION, Its Relation to Man and His Civilization. Its Prevention and Cure. By J. B. Huber, A.M., M.D., Fellow of the New York Academy of Medicine; Member of the National Association for the Study and Prevention of Tuberculosis. Cloth. Pp. 536. Price, $3.00 net. Philadelphia: J. B. Lippincott Co., 1906.

DIE HAMORRHOIDEN, ihre Ursachen, Symptome und Behandlung. Gemeinverständliche Darstellung. By Dr. F. Kuhn dirigierendem Arzt am Elisabeth-Krankenhaus in Kassel. Mit 20 abbildungen in Text. Paper. Pp. 65. Price, 2 marks. Munich: Verlag der Aerztlichen Rundschau, 1906.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY, Seventeenth Session, Held at Hotel Sagamore, Lake George, N. Y., June 19-21, 1905. Edited by L. E. La Fetra, M.D., Vol. XVII. Reprinted from Archives of Pediatrics, 1905-1906. Cloth. Pp. 228. New York: E. B. Treat & Co., 1906.

MODERN SURGICAL TECHNIC IN ITS RELATIONS AND WOUND-TREATMENT. By C. Y. Pearson, M.D., M.Ch., F.R.C.S., Professor of Surgery, Queen's College, Cork. Illustrated, with Two Colored and Other Plates. Cloth. Pp. 392. Price, $3.50 net. New York: William Wood & Co.

NOTES ON SURGERY FOR NURSES. By J. Bell, M.D., F.R.C.S., Edin., Consulting Surgeon to the Royal Infirmary, and to the Royal Hidinburgh Hospital for Sick Children. Sixth Edition, thoroughly revised. Cloth. Pp. 187. Price, $1.50 net. New York: William Wood & Co.

SANITARY LEGISLATION IN THE UNITED STATES Enacted During the Year 1905. Special Bulletin of the State Board of Health. Compiled for the State Board of Health by C. V. Chapin, M.D. Cloth. Pp. 318. Providence, R. I.; E. L. Freeman & Sons, 1906.

DIE ZUCKERKRANKHEIT (Diabetes). Ihre Ursachen und Bekämpfung gemeinverständliche dargestellt. By Dr. O. Burwinkel Kurarzt in Bad Nauheim (Winter San Remo). Paper. Pp. 31. Price, 1.20 mark. Munich: Verlag der Aerztlichen Rundschau, 1906.

STUDY OF THE CAUSE OF SUDDEN DEATH FOLLOWING THE INJECTION OF HORSE SERUM. By M. J. Rosenau and J. F. Anderson. Hygienic Laboratory—Bulletin No. 29. April, 1906. Paper. Pp. 95. Washington: Government Printing Office, 1906.

DER ALKOHOL UND DER ALKOHOLISMUS. Ein Wegweiser zum Verständnis moderner Kulturarbeit. von Dr. med. Kurt Bieling. Waldsanatorium Tannenhof-Friedrichroda. Paper. Pp. 84. Price, 1.40 mark. Munich: Verlag der Aerztlichen Rundschau, 1906.

TWENTIETH ANNUAL REPORT OF THE STATE BOARD OF HEALTH and Vital Statistics of the Commonwealth of Pennsylvania. Transmitted to the Governor, December 1, 1904. Cloth. Pp. 577. Harrisburg, Pa.: Harrisburg Publishing Co., 1906.

HANDBOOK OF SURGERY. By G. B. Buchanan, B.A., M.B., C.M., F.F.P.S., Assistant-Surgeon, Western Infirmary, Glasgow, etc. Cloth. Pp. 547. Price, $2.75 net. New York: William Wood & Co.

PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY IN MEDICINE. Vol. II. 1904-1905. Edited by the Secretary, New York, August 1, 1905. Paper. Pp. 106.

PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE. Vol. I. 1903-1904. Edited by the Secretary. Paper. Pp. 63. New York, June 1, 1904.